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Leu Phe Leu His Glu Thr Gly Ser Asn Asn Pro Leu Gly Ile Thr Ser
                            40
His Ser Asp Lys Ile Thr Phe His Pro Tyr Tyr Thr Ile Lys Asp Ala
Leu Gly Leu Leu Phe Leu Leu Ser Leu Met Thr Leu Thr Leu Phe
Ser Pro Asp Leu Leu Gly Asp Pro Asp Asn Tyr Thr Leu Ala Asn Pro
Leu Asn Thr Pro Pro His Ile Lys Pro Glu
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Val Glu Gly Ala Gly Asp Gly Ala Ala Ala Gly Pro Gly Gly Gly
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Ala	Ala 50	Glu	Ala	Хаа	Gln	Val 55		Arg	, Arg	Leu	Gln 60		Glu	Ser	Ala
Arg 65		Gln	Gln	Leu	Val 70		Lys	Glu	ı- Val	Lys 75		Arg	Glu	Lys	Gln 80
Phe	- Ser	Gln	Ala	Arg 85	Pro	Leu	Thr	Arg	Tyr 90		Pro	Ile	Arg	Lys 95	
Asp	Phe	Asp	Leu 100	Lys	Thr	His	Ile	- Glu 105		Ser	Gly	His	Gly 110	Val	Asp
Thr	Cys	Leu 115	His	Val	Val.	Lèu	Ser 120		Lys	Val	Cys	Arg 125	Gly	Tyr	Leu
Val	Lys 130	Met	Gly	Gly	Lys	Ile 135	Lys	Ser	Trp	Lys	Lys 140	Arg	Trp		Val
Phe 145	Asp	Arg	Leu	Lys	Arg 150	Thr	Leu	Ser	Tyr-	Tyr 155	Va:1	Asp	Lys	His	Glu 160
Thr	Lys	Leu	Lys	Gly 165	Val	Ile	Tyr	Phe	Gln 170	Ala	Ile	Glu	Gly-	Ser:	Val
Leu	Arg	Pro	Pro 180	Ala	Pro	Val	Gln	Pro 185	Arg	Arg	Gly	Phe	Ser 190	Ala	Ser
Thr	Met	Val 195	Thr	Glu	Lys	Pro	Glu 200	Pro	Ser	Pro	His	Leu- 205	Leu	Arg	Lys
Asp	Pro 210			٠.	-							•			
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<213 <213	0> 11 l> 18 2> PF 3> Ho	81 RT	sapie	ens								• •	-	~	
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Cys	Glu	Gly	Tyr 20	Asp	Pro	Asn	Ala	Leu 25	Tyr	Cys	Ile	Cys	Arg 30	Gln	Pro
His	Asn	Asn 35	Arg	Phe	Met	Ile 	Cys 40	_	Asp	Arg	Cys		Glu	Trp	Phe
His	Gly	Asp	Cys	Val	Gly	Ile	Ser	Glu	Ala	Arg	Gly	Arg	Leu	Leu	Glu

1183

60

Arg Asn Gly Glu Asp Tyr Ile Cys Pro Asn Cys Thr Ile Leu Gln Val 70 75 Gln Asp Glu Thr His Ser Glu Thr Ala Asp Gln Gln Glu Ala Lys Trp Arg Pro Gly Asp Ala Asp Gly Thr Asp Cys Thr Ser Ile Gly Thr Ile 105 Glu Gln Lys Ser Ser Glu Asp Gln Gly Ile Lys Gly Arg Ile Glu Lys Ala Ala Asn Pro Ser Gly Lys Lys Lys Leu Lys Ile Phe Gln Pro Val 135 Ile Glu Ala Pro Gly Ala Ser Lys Cys Ile Gly Pro Gly Cys Cys His 145 150 Val Ala His Pro Thr Arg Cys Thr Ala Val Met Thr Val Ser Ser Asn 165 170 Thr Pro Gln Arg Gln 180 <210> 1170 <211> 166 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (3) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (18) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (131) <223> Xaa equals any of the naturally occurring L-amino acids <400> 1170 Ala Gln Xaa Leu Ser Ser Pro Val Arg Gly Ile Ser Gly Glu Gln Ser 5 10

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1184

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Pro Phe Gln Leu Ser Asn His Thr Gly Arg Ile Lys Val Val Phe Thr 35 40 45

Pro Ser Ile Cys Lys Val Thr Cys Thr Lys Gly Ser Cys Gln Asn Ser 50 60

Cys Glu Lys Gly Asn Thr Thr Thr Leu Ile Ser Glu Asn Gly His Ala 65 70 75 80

Ala Asp Thr Leu Thr Ala Thr Asn Phe Arg Val Val Ile Cys His Leu  $85 \hspace{1.5cm} 90 \hspace{1.5cm} 95$ 

Pro Cys Met Asn Gly Gly Gln Cys Ser Ser Arg Asp Lys Cys Gln Cys 100 105 110

Pro Pro Asn Phe Thr Gly Lys Leu Cys Gln Ile Pro Val His Gly Ala 115 120 125

Ser Val Xaa Lys Leu Tyr Gln His Ser Gln Gln Pro Gly Lys Ala Leu 130 135 140

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Ser Gln Gln Glu Ser Lys 165

<210> 1171

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Asp Leu Ser Val Asn Phe Trp Glu Pro Asn Gly Phe Gly His Asp Phe 1 5 10 15

Pro Ala His Tyr Ile Leu Thr Gln Asn Phe Phe Arg Met Ala Phe Thr \$20\$ \$25\$ \$30

Ser Thr Pro Glu Ile 35

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WO 00/55350

1185

PCT/US00/05882

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Glu Ser Phe Ala Gly Ser Asp Asn Glu Ser Asp Glu Glu Val Ala Gly
         35
                             40
Lys Lys Ser Phe Ser Ala Gln Glu Arg Glu Tyr Ile Arg Gln Gly Lys
Glu Ala Thr Ala Val Xaa Asp Gln Ile Leu Ala Gln Glu Glu Asn Trp
                                         75
65
                     70
Lys Phe Glu Lys Asn Asn Glu Tyr Gly Asp Thr Val Tyr Thr Ile Glu
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85 90 95 Val Pro Phe His Gly Lys Thr Phe Ile Leu Lys Thr Phe Leu Pro Cys 100 105 Pro Ala Xaa Xaa Val Tyr Gln Glu Val Ile Leu Gln Pro Glu Arg Met 120 Val Leu Trp Asn Lys Thr Val Thr Ala Cys Gln Ile Leu Gln Arg Val 135 140 Glu Asp Asn Thr Leu Ile Ser Tyr Asp Val Ser Ala Arg Gly Cys Gly 150 155 Arg Arg Xaa Leu Pro Gln Xaa Thr Ser 165 <210> 1173 <211> 180 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (171) <223> Xaa equals any of the naturally occurring L-amino acids <400> 1173 Glu Tyr Gly Asp Thr Val Tyr Thr Ile Glu Val Pro Phe His Gly Lys 5 Thr Phe Ile Leu Lys Thr Phe Leu Pro Cys Pro Ala Glu Leu Val Tyr Gln Glu Val Ile Leu Gln Pro Glu Arg Met Val Leu Trp Asn Lys Thr 40 Val Thr Ala Cys Gln Ile Leu Gln Arg Val Glu Asp Asn Thr Leu Ile 50 Ser Tyr Asp Val Ser Ala Gly Ala Ala Gly Gly Val Val Ser Pro Arg Asp Phe Val Asn Val Arg Arg Ile Glu Arg Arg Arg Asp Arg Tyr Leu 90 Ser Ser Gly Ile Ala Thr Ser His Ser Ala Lys Pro Pro Thr His Lys 105

1187

Tyr Val Arg Gly Glu Asn Gly Pro Gly Gly Phe Ile Val Leu Lys Ser 115 120 125 Ala Ser Asn Pro Arg Val Cys Thr Phe Val Trp Ile Leu Asn Thr Asp 135 Leu Lys Gly Arg Leu Pro Arg Tyr Leu Ile His Gln Ser Leu Ala Ala 150 Thr Met Phe Glu Phe Ala Phe His Leu Arg Xaa Arg Ile Ser Glu Leu 170 Gly Ala Arg Ala 180 <210> 1174 <211> 436 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (14) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (426) <223> Xaa equals any of the naturally occurring L-amino acids <400> 1174 Arg His Gln Arg Arg Arg Ser Val Trp Arg Ser Arg Gly Xaa Cys Cys 5 Arg Cys Cys Cys Thr Asn Arg Arg Ser Pro Gln Pro Cys Ala Ser Ser 20 25 Leu Pro Pro Arg Thr Gly Glu Lys Gln Pro Arg Asn Phe Met Asn Lys 40 His Gln Lys Pro Val Leu Thr Gly Gln Arg Phe Lys Thr Arg Lys Arg Asp Glu Lys Glu Lys Phe Glu Pro Thr Val Phe Arg Asp Thr Leu Val Gln Gly Leu Asn Glu Ala Gly Asp Asp Leu Glu Ala Val Ala Lys Phe 85 90

Leu	Asp	) Ser	100		' Ser	Arg	Leu	Asp 105		Arg	J Arg	Туг	110		Thr
Leu	Phe	Asp		e Leu	val	Ala	Gly 120		Met	: Leu	a Ala	Pro		Gly	Thr
Arg	Ile 130		Asp	Gly	Asp	Lys 135		Lys	Met	Thr	140		Cys	Val	Phe
Ser 145	Ala	Asn	Glu	Asp	His 150		Thr	Ile	Arg	Asn 155		Ala	Gln	Val	Phe 160
Asn	Lys	Leu	Ile	Arg 165	Arg	Tyr	Lys	туr	Leu 170		Lys	Ala	Phe	Glu 175	
Glu	Met	Lys	Lys 180		Leu	Leu	Phe	Leu 185	Lys	Ala	Phe	Ser	Glu 190	Thr	Glu
Gln	Thr	Lys 195	Leu	Ala	Met	Leu	Ser 200	Gly	Ile	Leu	Leu	Gly 205		Gly	Thr
Leu	Pro 210		Thr	Ile	Leu	Thr 215	Ser	Leu	Phe	Thr	Asp 220	Ser	Leu	Val	Lys
Glu 225	Gly	Ile	Ala	Ala	Ser 230	Phe	Ala	Val	Lys	Leu 235	Phe	Lys	Ala	Trp	Met 240
Ala	Glu	Lys	Asp	Ala 245	Asn	Ser	Val	Thr	Ser 250	Ser	Leu	Arg	Lys	Ala 255	Asn
Leu	Asp	Lys	Arg 260	Leu	Leu	Glu	Leu	Phe 265	Pro	Val	Asn	Arg	Gln 270	Ser	Val
Asp	His	Phe 275	Ala	Lys	Tyr	Phe	Thr 280	Asp	Ala	Gly	Leu	Lys 285	Glu	Leu	Ser
Asp	Phe 290	Leu	Arg	Val	Gln	Gln 295	Ser	Leu	Gly	Thr	Arg 300	Lys	Glu	Leu	Gln
Lys 305	Glu	Leu	Gln	Glu	Arg 310	Leu	Ser	Gln	Glu	Cys 315	Pro	Ile	Lys	Glu	Val 320
<b>Val</b>	Leu	Tyr	Val	Lys 325	Glu	Glu	Met	Lys	Arg 330	Asn	Asp	Leu	Pro	Glu 335	Thr
Ala	Val	Ile	Gly 340	Leu	Leu	Trp		Cys 345	Ile	Met	Asn	Ala	Val 350	Glu	Trp
Asn		Lys 355		Glu			Ala 360			Ala	Leu	Lys 365		Leu	Lys

1189

Gln Tyr Ala Pro Leu Leu Ala Val Phe Ser Ser Gln Gly Gln Ser Glu 370 375 Leu Ile Leu Leu Gln Lys Val Gln Glu Tyr Cys Tyr Asp Asn Ile His 395 Phe Met Lys Ala Phe Gln Lys Ile Val Leu Pro Tyr Thr Ile Ser Val 410 Leu Leu Leu Arg Ser Glu His Gln Leu Xaa Ser Cys Arg Phe Gly Thr 420 425 Ser Gly Thr Ser 435 <210> 1175 <211> 366 <212> PRT <213> Homo sapiens <400> 1175 Thr Glu Pro Val Gly Tyr Thr Lys Ala Glu Glu Pro Ile Ala Met Arg 5 10 Ser Leu Gly Ala Leu Leu Leu Leu Ser Ala Cys Leu Ala Val Ser Ala Gly Pro Val Pro Thr Pro Pro Asp Asn Ile Gln Val Gln Glu Asn 40 Phe Asn Ile Ser Arg Ile Tyr Gly Lys Trp Tyr Asn Leu Ala Ile Gly Ser Thr Cys Pro Trp Leu Lys Lys Ile Met Asp Arg Met Thr Val Ser Thr Leu Val Leu Gly Glu Gly Ala Thr Glu Ala Glu Ile Ser Met Thr 85 Ser Thr Arg Trp Arg Lys Gly Val Cys Glu Glu Thr Ser Gly Ala Tyr Glu Lys Thr Asp Thr Asp Gly Lys Phe Leu Tyr His Lys Ser Lys Trp Asn Ile Thr Met Glu Ser Tyr Val Val His Thr Asn Tyr Asp Glu Tyr 135 Ala Ile Phe Leu Thr Lys Lys Phe Ser Arg His His Gly Pro Thr Ile

145					150					155	•				160
Thr	Ala	Lys	Leu	165	Gly	Arg	Ala	Pro	Gln 170		Arg	Glu	Thr	Leu 175	
Gln	Asp	Phe	Arg 180		Val	Ala	Gln	Gly 185		Gly	Ile	Pro	Glu 190		Ser
Ile	Phe	Thr 195		Ala	Asp	Arg	Gly 200		Cys	Val	Pro	Gly 205		Gln	Glu
Pro	Glu 210	Pro	Ile	Leu	Ile	Pro 215		Val	Arg	Arg	Ala 220	Val	Leu	Pro	Gln
Glu 225	Glu	Glu	Gly	Ser	Gly 230	Gly	Gly	Gln	Leu	Val 235	Thr	Glu	Val	Thr	Lys 240
				245	· Gln				250					255	
Met	Thr	Ser	Arg 260	Tyr	Phe	Tyr	Asn	Gly 265		Ser	Met	Ala	Cys 270	Glu	Thr
Phe	Gln	Tyr- 275	Gly	Gly	Cys.	Met	Gly 280	Asn	Gly	Asn	Asn	Phe 285	Val	Thr	Glu
	290	_			Thr	295					300	•			
305					Cys 310					315					320
				325	Cys				330					335	
			340		Tyr			345					350	Cys	Gly
Val	Pro	Gly 355	Asp	Gly	Asp	Glu	G1u 360	Leu	Leu	Arg	Phe	Ser 365	Asn		
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Ser Pro Ser Pro Leu Ser Trp Ile Leu Trp Thr Cys Trp Pro Ser Thr
Ala Ala Thr Arg Pro Gly Arg Arg Lys Trp Gly Cys Arg Leu Cys Pro
                         55
Arg His Ser Ser Pro Leu Leu Leu His Leu Asn Leu Leu Ala Trp
 65
                     70
                                         75
Ala Pro Tyr Pro His Pro Ala Thr Thr Arg Gly Asp Arg Lys Gln Lys
Lys Arg Asp Gln Asn Lys Ser Ala Xaa Leu Arg Tyr Arg Gln Arg Lys
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Gly Ala Gly Gly Val Glu Gly Kaa Gly Lys Gly Lys Leu Kaa Gly Gly
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                            120
Trp Glu Gly Lys Gly
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                  5
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Ala	Gly	His 35		. Ser	Ser	Pro	Pro 40		. Val	. Asp	Thr	Val 45	His	. Gly	Lys
Val	Leu 50		.Lys	. Phe	. Val	Ser 55		Glu	Gly	Phe	·Ala		. Pro	.Val	. Ala
Ile 65	. Phe	, Leu	Gly	Ile	Pro 70		Ala	Lys	Pro	Pro . 75		Gly	Pro	Leu	Arg 80
Phe	Thr	Pro	- Pro	G1n 85	Pro	Ala	Glu	Pro	Trp		Phe	Val	Lys	Asn 95	
Thr	Ser	Tyr	Pro 100	Pro	Met	. Cys		Gln 105	_	Pro	Lys	.Ala	-Gly 110		. Leu
Leu	Ser	Glu 115	Leu	Phe	Thr	Asn	Arg 120	Lys	Glu	Asn	Ile	Pro 125	Leu	Lys	Leu
Ser	Glu 130	Asp	Cys	Leu	Tyr	Leu 135	Asn	Ile	Tyr	Thr	Pro 140	Ala	Asp	Leu	Thr
Lys 145	Lys	Asn	Arg	Leu	Pro 150	Val	Met	Val	Trp	11e 155	His	Gly	Gly	Gly	Leu 160
Met	Val	Gly ·	Ala	Ala 165	Ser	Thr	Tyr	Asp	Gly 170		Ala	Leu	Ala	Ala 175	His
Glu	Asn	Val	Val 180	Val	Val	Thr	Ile	Gln 185	Tyr	Arg	Leu	Gly	11e 190	Trp.	Gly
Phe	Phe	Ser 195	Thr.	Gly	Asp	Glu	His 200	Ser	Arg	Gly	Asn	T <sup>†</sup> p 205	Gly	His	Leu
Asp	Gln 210	Val	Ala	Ala	Leu	Arg 215	Trp	Val	Gln	Asp	Asn 220	Ile	Ala	Ser	Phe
Gly 225	Gly	Asn	Pro	Gly	Ser 230	Val	Thr	Ile	Phe	Gly 235	Glu	Ser	Ala	Gly	Gly 240
Glu	Ser	Val	Ser	Val 245	Leu	Val	Leu	Ser	Pro 250	Leu	Ala	Lys	Asn	Leu 255	Phe
His	Arg 	Ala	Ile 260	Ser	Glu	Ser	Gly	Val 265	Ala	Leu	Thr	Ser	Val 270	Leu	Val
Lys	_	_	Asp		Lys						Ile		Ile	Thr	Ala

Gly	Cys 290	Lys	Thr	Thr	Thr	Ser 295		Val	Met	Val	300	-	Leu	Arg	Gln
Lys 305	Thr	Glu	Glu	Glu	Leu 310	Leu	Glu	Thr	Thr	Leu 315		Met	Lys	Phe	Leu 320
Ser	Leu	Asp	Leu	Gln 325	Gly	Asp	Pro	Arg	Glu 330		Gln	Pro	Leu	Leu 335	-
Thr	Val	Ile	Asp 340	Gly	Met	Leu	Leu	Leu 345	_	Thr	Pro	Glu	Glu 350	Leu	Gln
Ala	Glu	Arg 355	Asn	Phe	His	Thr	Val 360		туг	Met	Val	Gly 365	Ile	Asn	Lys
Gln	Glu 370	Phe	Gly	Trp	Leu	11e 375	Pro	Met	Gln	Leu	Met 380	Ser	туr	Pro	Leu
Ser 385	Glu	Gly	Gln	Leu	Asp 390	Gln	Lys	Thr	Ala	Met 395	Ser	Leu	Leu	Trp	Lys 400
ser	Tyr	Pro	Leu	Val 405	Cys	Ile	Ala	Lys	Glu 410	Leu	Ile	Pro	Glu	Ala 415	Thr
Glu	Lys	Tyr	Leu 420	Gly	Gly	Thr	Asp	Asp 425	Thr	Val	Lys	Lys	Lys 430	Asp	Leu
Phe	Leu	Asp 435	Leu	Ile	Ala	Asp	Val 440	Met	Phe	Gly	Val	Pro 445	Ser	Val	Ile
Val	Ala 450	Arg	Asn	His	Arg	Asp 455	Ala	Gly	Ala	Pro	Thr 460	Tyr	Met	Tyr	Glu
465	Gln				470					475					480
	Gly	-		485	·				490			•		495	
	Lys		500					505					510		
	Lys	515					520			-		525			
	<b>Leu</b> 530					535	-			-	540				
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Ser Thr Glu Pro Cys Ala Gln Leu Ser Ile Ser Ser Ile Gly Val Val 35 40 45

Gly Thr Ala Glu Asp Asn Arg Ser His Ser Ala His Phe Phe Glu Phe 50 55 60

Leu Thr Lys Glu Leu Ala Leu Gly Gln Asp Arg Ile Leu Ile Arg Phe 65 70 75 80

Phe Pro Leu Glu Ser Trp Gln Ile Gly Lys Ile Gly Thr Val Met Thr
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Phe Leu

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WO 00/55350

1195

PCT/US00/05882

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Ala His Ser Pro Ala Ser Ser Ala Ala Cys Arg Thr. Met Ala Gln Gly
Gln Arg Lys Phe Gln Ala His Lys Pro Ala Lys Ser Lys Thr Ala Ala
                            40
Ala Xaa Ser Glu Lys Asn Arg Gly Pro Arg Lys Gly Gly Arg Val Ile
Ala Pro Xaa Lys Ala Arg Val Val Gln Gln Lys Leu Lys Lys Asn
Leu Glu Val Gly Ile Arg Lys Ile Glu His Asp Val Val Met Lys
                 85
                                    90
Ala Ser Ser Ser Leu Pro Lys Lys Leu Ala Leu Leu Lys Ala Pro Ala
                                105
Lys Lys Lys Gly Ala Ala Ala Thr Ser Ser Lys Thr Pro Ser
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                           120
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                5
Arg Glu Arg Val Cys Val Ser Val Arg Val Ser Val Cys Ala Arg Ala
Arg Ser Trp Pro Asn Val Arg Thr Leu His Lys Gly Gly Arg Ser Ser
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туr	Arg 50		Phe	Asn	Val	Arg		Thr	Ile	Phe	Leu 60		Phe	Gln	Le
Tyr 65	Gln	Ile	Leu	Val	Pro		His	Arg	Asn	Asp 75		Glu	Ser	Gln	Th
Lys	Cys	Ile	Ile	Cys 85		Ile	Leu	Ile	Leu 90		Leu	His	Ser		
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	2> P											•_			
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Thr	Leu	Phe	Thr 20	Leu	Cys	Ala	Cys	Ala 25	Lys	Gly	Ala	Met	Ala 30	Ala	Ser
Cys	Val	Leu 35	Leu	His	Thr	Gly	Gln 40	Lys	Met	Pro	Leu	Ile 45	Gly	Leu	Gly
Thr	Trp 50	Lys	Ser	Glu	Pro	Gly 55	Gln	Val	Lys	Ala	Ala 60	Val	Lys	туг	Ala :
Leu 65	Ser	Val	Gly	Туг	Arg 70	His	Ile	Asp	Cys	Ala 75	Ala	Ile	Tyr	Gly	Asn 80
Glu	Pro	Glu	Ile	Gly 85	Glu	Ala	Leu	Lys	Glu 90	Asp	Val	Gly	Pro	Gly 95	Lys
Ala	Val	Pro	Arg 100	Glu	Glu	Leu	Phe	Val 105	Thr	Ser	Lys	Leu	Trp 110	Asn	Thr
Lys	His	His 115	Pro	Glu	Asp	Val	Glu 120	Pro	Ala	Leu	Arg	Lys 125	Thr	Leu	Ala
Asp	Leu 130	Gln	Leu	Glu	туr	Leu 135	Asp	Leu	Tyr	Leu	Met 140	Hís	Trp	Pro	Tyr
Ala 145	Phe	Glu	Arg	Gly	Asp 150	Asn	Pro	Phe	Pro	Lys 155	Asn	Ala	Asp	Gly	Thr 160

Ile Cys Tyr Asp Ser Thr His Tyr Lys Glu Thr Trp Lys Ala Leu Glu

170

175 -

Ala	Leu	Val	Ala 180	Lys	Gly	Leu	Val	Gln 185	Ala	Leu	Gly	Leu	Ser 190		Phe
Asn	Ser	Arg 195	Gln	Ile	Asp	Asp	11e 200	Leu	Ser	Val	Ala	Ser 205		Arg	Pro
Ala	Val 210	Leu	Gln	Val	Glu	Cys 215	His	Pro	Tyr	Leu	Ala 220	Gln	Asn	Glu	Leu
Ile 225	Ala	His	Cys	Gln	Ala 230	Arg	Gly	Leu	Glu	Val 235	Thr	Ala	Tyr	Ser	Pro 240
				245		Ala			250					255	
			260			Leu		265					270		
		275				Arg	280					285			
	290					Pro 295					300				
305					310	Pro				315					320
				325		Ile			330					335	•
	Val	Pro	Arg 340	Asp	Ala	Gly	His	Pro 345	Leu	Tyr	Pro	Phe	Asn 350	Asp	Pro
ſyr															
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Ala 1	Arg	Asp	Ser	Leu 5	Gln	Leu	Ser	Met	Ala 10	Gln	Thr	Ser	Ser	Tyr 15	Phe

Met Leu Ile Ser Cys Leu Met Phe Leu Ser Gln Ser Gln Gly Gln Glu

30

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Ala Gln Thr Glu Leu Pro Gln Ala Arg Ile Ser Cys Pro Glu Gly Thr
          35
                                                  45
 Asn Ala Tyr Arg Ser Tyr Cys Tyr Tyr Phe Asn Glu Asp Arg Glu Thr
Trp Val Asp Ala Asp Leu Tyr Cys Gln Asn Met Asn Ser Gly Asn Leu
Val Ser Val Leu Thr Gln Ala Glu Gly Ala Phe Val Ala Ser Leu Ile
                  85
Lys Glu Ser Gly Thr Asp Asp Phe Asn Val Trp Ile Gly Leu His Asp
         . 100
                                 105
Pro Lys Lys Asn Arg Arg Trp His Trp Ser Ser Gly Ser Leu Val Ser
        115
                            120
                                                 125
Tyr Lys Ser Trp Gly Ile Gly Ala Pro Ser Ser Val Asn Pro Gly Tyr
                         135
Cys Val Ser Leu Thr Ser Ser Thr Gly Phe Gln Lys Trp Lys Asp Val
145
                    150
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Pro Cys Glu Asp Lys Phe Ser Phe Val Cys Lys Phe Lys Asn
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	0> 1 Ile		Ser	Tyr 5	Ile	Arg	Leu	Glu	Leu 10		Ser	Met	Trp	Leu 15	Leu
Val	Ser	Val	Ile 20	Leu	Ile	Ser	Arg	Ile 25	Ser	Ser	Val	Gly	Gly 30	Glu	Ala
Thr	Phe	Cys 35	Asp	Phe	Pro	Lys	Ile 40	Asn	His	Gly	Ile	Leu 45	туг	Asp	Glu
Glu	Lys 50	Туг	Lys	Pro	Phe	Ser 55	Gln	Val	Pro	Thr	Gly 60	Glu	Val	Phe	Tyr
Tyr 65	Ser	Cys	Glu	Туг	Asn 70	Phe	Val	Ser	Pro	Ser 75	Lys	Ser	Phe	Trp	Thr 80
Arg	Ile	Thr	Cys	Thr 85	Glu	Glu	Gly	Trp	Ser 90	Pro	Thr	Pro	Lys	Cys 95	Leu
Arg	Leu	Cys	Phe 100	Phe	Pro	Phe	Val	Glu 105	Asn	Gly	His	Ser	Glu 110	Ser	Ser
Gly	Gln	Thr 115	His	Leu	Glu	Gly	Asp 120	Thr	Val	Gln	Ile	11e 125	Cys	Asn	Thr
Gly	Туг 130	Arg	Leu	Gln	Asn	Asn 135	Glu	Asn	Asn	Ile	Ser 140	Суѕ	Val	Glu	Arg
Gly 145	Trp	Ser	Thr	Pro	Pro 150	Lys	Cys	Arg	Ser	Thr 155	Asp	Thr	Ser	Cys	Val 160
Asn	Pro	Pro	Thr	Val 165	Gln	Asn	Ala	Xaa	Ile 170	Xaa	Ser	Arg	Gln	Met 175	Ser
Lys	Tyr	Pro	Ser 180	Gly	Glu	Arg	Val	Arg 185	туr	хаа	Cys	Arg	Ser 190	Pro	туг
Glu	Met	Phe 195	Gly	Asp	Glu	Glu	Val 200	Met	Cys	Leu	Asn	Gly 205	Asn	Trp	Thr
Glu	Pro 210	Pro	Gln	Cys	Lys	Asp 215	Ser	Thr	Gly	_	Cys 220	Gly	Pro	Pro	Pro

Pro Ile Asp Asn Gly Asp Ile Thr Ser Phe Pro Leu Ser Val Tyr Ala 225 230 Pro Ala Ser Ser Val Glu Tyr Gln Cys Gln Asn Leu Tyr Gln Leu Glu 250 Gly Asn Lys Arg Ile Thr Cys Arg Asn Gly Gln Trp Ser Glu Pro Pro 265 Lys Cys Leu His Pro Cys Val Ile Ser Arg Glu Ile Met Glu Asn Tyr 280 Asn Ile Ala Leu Arg Trp Thr Ala Lys Gln Lys Leu Tyr Xaa Arg Thr 295 Gly Glu Ser Xaa Glu Phe Val Cys Lys Arg Gly Tyr Arg Leu Ser Ser 315 320 Arg Ser His Thr Leu Arg Thr Thr Cys Trp Asp Gly Lys Leu Glu Tyr 330 Pro Thr Cys Ala Lys Arg 340 <210> 1184 <211> 198 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (2) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (161) <223> Xaa equals any of the naturally occurring L-amino acids <400> 1184 Pro Xaa Arg Pro Arg Gly Ala Ala Ala Ala Ala Ala Ala Ala Gly Ala Ala Met Pro Lys Gly Gly Arg Lys Gly Gly His Lys Gly Arg Ala Arg 30

Gln Tyr Thr Ser Pro Glu Glu Ile Asp Ala Gln Leu Gln Ala Glu Lys

40

1201

Gln Lys Ala Arg Glu Glu Glu Glu Gln Lys Glu Gly Gly Asp Gly Ala Ala Gly Asp Pro Lys Lys Glu Lys Lys Ser Leu Asp Ser Asp Glu Ser Glu Asp Glu Glu Asp Asp Tyr Gln Gln Lys Arg Lys Gly Val Glu Gly 90 Leu Ile Asp Ile Glu Asn Pro Asn Arg Val Ala Gln Thr Thr Lys Lys 105 Val Thr Gln Leu Asp Leu Asp Gly Pro Lys Glu Leu Ser Arg Arg Glu 120 Arg Glu Glu Ile Glu Lys Gln Lys Ala Lys Glu Arg Tyr Met Lys Met 135 His Leu Ala Gly Lys Thr Glu Gln Ala Lys Ala Asp Leu Ala Arg Leu Xaa Ile Ile Arg Lys Gln Arg Glu Glu Ala Ala Arg Lys Lys Glu Glu 165 Glu Arg Lys Ala Lys Asp Asp Ala Thr Leu Ser Gly Lys Arg Met Gln 190 Ser Leu Ser Leu Asn Lys 195 <210> 1185 <211> 210 <212> PRT <213> Homo sapiens <400> 1185 Ala His Ala Ser Ala His Ala Ser Gly Met Asp Leu Ser Leu Leu Trp 10 Val Leu Leu Pro Leu Val Thr Met Ala Trp Gly Gln Tyr Gly Asp Tyr 25 Gly Tyr Pro Tyr Gln Gln Tyr His Asp Tyr Ser Asp Asp Gly Trp Val 35 Asn Leu Asn Arg Gln Gly Phe Ser Tyr Gln Cys Pro Gln Gly Gln Val Ile Val Ala Val Arg Ser Ile Phe Ser Lys Lys Glu Gly Ser Asp Arg

Gln	Trp	Asn	Tyr	Ala 85	Cys	Met	Pro	Thr	Pro 90		Ser	Leu	Gly	Glu 95	
Thr	Glu	Cys	Trp 100		Glu	Glu	Ile	Asn 105	-	Ala	Gly	Met	Glu 110	_	Туг
Gln	Thr	Cys 115		Asn	Asn	Gly	Leu 120	Val	Ala	Gly	Phe	Gln 125		Arg	туг
Phe	Glu 130	Ser	Val	Leu	Asp	Arg 135		Trp	Gln	Phe	Tyr 140	Cys	Cys	Arg	Tyr
Ser 145	Lys	Arg	Суѕ	Pro	Tyr 150	Ser	Cys	Trp	Leu	Thr 155		Glu	Tyr	Pro	Gly 160
His	Tyr	Gly	Glu	Glu 165	Met	Asp	Met	Ile	Ser 170	Tyr	Asn	туr	Asp	Tyr 175	Ťyr
Ile	Arg	Gly	Ala 180	Thr	Thr	Thr	Phe	Ser 185	Ala	Val	Glu	Arg	Asp 190	Arg	Gln
Trp	Lys	Phe 195	Ile	Met	Cys	Arg	Met 200	Thr	Glu	Tyr	Asp	Cys 205	Glu	Phe	Ala
Asn	Val 210														
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<211	L> 14	1													
	?> PF 3> Ho		sapie	ens											
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Arg l	Ala	Ile	Tyr	Phe 5	Leu	Arg	Val	His	Arg 10	Leu	Trp	Ser	Ser	Ile 15	Ser
Leu	Leu	Phe	Phe 20	Pro	Ser	Ala	Lys	Met 25	Ala	Leu	Glu	Thr	Val 30	Pro	Lys
Asp	Leu	Arg 35	His	Leu	Arg	Ala	Cys 40	Leu	Leu	Cys		Leu 45	Val	Lys	Thr
Ile	Asp 50	Gln	Phe	Glu	Tyr	Asp 55	Gly	Cys	Asp	Asn	Суs 60	Asp	Ala	Tyr	Leu
Gln 65	Met	Lys	Gly	Asn	Arg 70	Glu	Met	Val	туr	Asp 75	Cys	Thr	Ser	Ser	Ser 80

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Phe Asp Gly Ile Ile Ala Met Met Ser Pro Glu Asp Ser Trp Val Ser
Lys Trp Gln Arg Val Ser Asn Phe Lys Pro Gly Val Tyr Ala Val Ser
            100
                                105
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Val Thr Gly Arg Leu Pro Gln Gly Ile Val Arg Glu Leu Lys Ser Arg
Gly Val Ala Tyr Lys Ser Arg Asp Thr Ala Ile Lys Thr
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Tyr Ser Val Leu Thr Ser Gly Ser His Val Phe Leu Cys Gln Val Ile
Lys Tyr Leu Val Leu Val Phe Cys Leu Xaa Pro Lys Leu Pro Leu Trp
        35
                             40
Val His Arg Arg Leu Gly Ser Ile Val Arg Met Ala Ile Arg Glu Tyr
Lys Xaa Gly Phe Ser Lys Gly Leu Gly Xaa Asp Ser
65
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<210> 1188

<211> 516

<212> PRT

<213> Homo sapiens

<400> 1188

Ile Arg Ile Ala Ala Leu Asp Asp Phe Arg Thr Ser Leu Thr Met Ser 1 5 10 15

Ser Thr Arg Ser Gln Asn Pro His Gly Leu Lys Gln Ile Gly Leu Asp
20 25 30

Gln Ile Trp Asp Asp Leu Arg Ala Gly Ile Gln Gln Val Tyr Thr Arg  $35 \hspace{1cm} 40 \hspace{1cm} 45$ 

Gln Ser Met Ala Lys Ser Arg Tyr Met Glu Leu Tyr Thr His Val Tyr 50 55 60

Asn Tyr Cys Thr Ser Val His Gln Ser Asn Gln Ala Arg Gly Ala Gly 65 70 75 80

Val Pro Pro Ser Lys Ser Lys Lys Gly Gln Thr Pro Gly Gly Ala Gln 85 90 95

Phe Val Gly Leu Glu Leu Tyr Lys Arg Leu Lys Glu Phe Leu Lys Asn 100 105 110

Tyr Leu Thr Asn Leu Leu Lys Asp Gly Glu Asp Leu Met Asp Glu Ser 115 120 125

Val Leu Lys Phe Tyr Thr Gln Gln Trp Glu Asp Tyr Arg Phe Ser Ser 130 135 140

Lys Val Leu Asn Gly Ile Cys Ala Tyr Leu Asn Arg His Trp Val Arg 145 150 155 160

Arg Glu Cys Asp Glu Gly Arg Lys Gly Ile Tyr Glu Ile Tyr Ser Leu 165 170 175

Ala Leu Val Thr Trp Arg Asp Cys Leu Phe Arg Pro Leu Asn Lys Gln 180 185 190

Val Thr Asn Ala Val Leu Lys Leu Ile Glu Lys Glu Arg Asn Gly Glu 195 200 205

Thr Ile Asn Thr Arg Leu Ile Ser Gly Val Val Gln Ser Tyr Val Glu 210 215 220

Leu Gly Leu Asn Glu Asp Asp Ala Phe Ala Lys Gly Pro Thr Leu Thr

225					230					235					240
Val	Tyr	Lys	Glu	Ser 245		Glu	Ser	Gln	Phe 250		Ala	Asp	Thr	Glu 255	_
Phe	Tyr	Thr	Arg 260	Glu	Ser	Thr	Glu	Phe 265		Gln	Gln	Asn	Pro 270		Thr
Glu	туr	Met 275	Lys	Lys	Ala	Glu	Ala 280	Arg	Leu	Leu	Glu	Glu 285	Gln	Arg	Arg
Val	Gln 290	Val	Tyr	Leu	His	Glu 295	Ser	Thr	Gln	Asp	Glu 300	Leu	Ala	Arg	Lys
Cys 305	Glu	Gln	Val	Leu	Ile 310	Glu	Lys	His	Leu	Glu 315	Ile	Phe	His	Thr	Glu 320
Phe	Gln	Asn	Leu	Leu 325	Asp	Ala	Asp	Lys	Asn 330	Glu	Asp	Leu	Gly	Arg 335	Met
туг	Asn	Leu	Val 340	Ser	Arg	Ile	Gln	Asp 345	Gly	Leu	Gly	Glu	Leu 350	Lys	Lys
Leu	Leu	Glu 355	Thr	His	Ile	His	Asn 360	Gln	Gly	Leu	Ala	Ala 365	Ile	Glu	Lys
Cys	Gly 370	Glu	Ala	Ala	Leu	Asn 375	Asp	Pro	Lys	Met	Tyr 380	Val	Gln	Thr	Val
Leu 385	Asp	Val	His	Lys	Lys 390	Tyr	Asn	Ala	Leu	Val 395	Met	Ser	Ala	Phe	Asn 400
Asn	Asp	Ala	Gly	Phe 405	Val	Ala	Ala	Leu	Asp 410	Lys	Ala	Суѕ	Gly	Arg 415	Phe
Ile	Asn	Asn	Asn 420	Ala	Val	Thr	Lys	Met 425	Ala	Gln	Ser	Ser	Ser 430	Lys	Ser
Pro	Glu	Leu 435	Leu	Ala	Arg	Tyr	Cys 440	Asp	Ser	Leu	Leu	Lys 445	Lys	Ser	Ser
Lys	Asn 450	Pro	Glu	Glu	Ala	Glu 455	Leu	Glu	Asp	Thr	Leu 460	Asn	Gln	Val	Met
Val 465	Val	Phe	Lys	Tyr	11e 470	Glu	Asp	Lys	Asp	Val 475	Phe	Gln	Lys	Phe	Tyr 480
Ala	Lys	Met	Leu	Ala 485	Lys	Arg	Leu	Val	H15 490	Gln	Asn	Ser	Ala	Ser 495	Asp
Asp	Ala	Glu	Ala	Ser	Met	Ile	Ser	Lys	Leu	Lys	Gln	Ala	Cys	Gly	Phe

500 505 510 Glu Tyr Thr Ser 515 <210> 1189 <211> 287 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (20) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (24) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (27) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (55) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (172) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (254) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (271) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (274) <223> Xaa equals any of the naturally occurring L-amino acids

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	1> S														
		275)													
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<22	0>														
<22	1> s	ITE													
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Met	Ser	Tyr	Cys	Asp	Glu	Ser	Arg	Leu	Ser	Asn	Leu	Leu	Arg	Arg	Ile
1				5					10					15	
Thr	Arg	Glu	Xaa 20	Asp	Arg	Asp	Xaa	Arg 25	Leu	Xaa	Thr	Val	Lys 30	Gln	Leu
I.vs	Glu	Phe	Tle	Gln	Gln	Pro	Glu	Δen	Tve	LAN	17a 1	Ten	v = 1	Lys	Gln
-10	014	35		J	01	110	40	AJII	Буз	Deu	Vu.	45	Vai	Буз	GII.
Leu	Asp 50	Ile	Leu	Ala	Ala	Xaa 55	His	Asp	Val	Leu	Asn 60	Glu	Ser	Ser	Lys
	30					33					60				
Leu	Leu	Gln	Glu	Leu	Arg	Gln	Glu	Gly	Ala	Cys	Cys	Leu	Gly	Leu	Leu
65					70			_		75	•		_		80
Cys	Ala	Ser	Leu		Tyr	Glu	Ala	Glu	_	Ile	Phe	Lys	Trp	Ile	Phe
				85					90					95	
Ser	Lys	Phe	Ser	Ser	Ser	Ala	Lvs	Asp	Glu	Val	Lvs	Leu	Leu	туr	Leu
	1		100				-1-	105			-,-		110	-1-	
Cys	Ala		Tyr	Lys	Ala	Leu		Thr	Val	Gly	Glu	-	Lys	Ala	Phe
		115					120					125			
Ser	Ser	Val	Mo+	Gle	Len	Va1	Mat	Thr	Ser	Lau	Glr	Ser	Tle	Leu	Glu
361	130	vaı	Met	GIII	ren	135	met	TIIL	ser	rea	140	ser	116	reu	GIU
	130					• • • • • • • • • • • • • • • • • • • •					140				
Asn	Val	Asp	Thr	Pro	Glu	Leu	Leu	Cys	Lys	Cys	Val	Lys	Cys	Ile	Leu
145					150					155					160
_				_				_							
Leu	Val	Ala	Arg	-	Tyr	Pro	His	Ile		Ser	Xaa	Asn	Phe	Arg	Asp
				165					170					175	
Thr	Val	Asp	Ile	Lev	Va]	Glv	Trp	His	Ara	Asp	His	Thr	Gln	Lys	Pro
_	_		180			1		185	9				190	-1-2	
Ser	Leu		Gln	Gln	Val	Ser	_				Ser		Glu	Pro	Phe
		195					200					205			

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Trp Val Ala Asp Leu Ala Phe Pro Thr Thr Leu Leu Gly Gln Phe Leu 210 215 220
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Glu Asp Met Glu Ala Tyr Ala Glu Asp Leu Ser His Val Ala Ser Gly 225 230 235 240

Glu Ser Val Asp Glu Asp Val Pro Pro Pro Ser Val Ser Xaa Pro Lys 245 250 255

Leu Ala Ala Leu Leu Arg Val Phe Ser Thr Val Val Arg Ser Xaa Gly 260 265 270

Glu Xaa Xaa Ser Pro Ile Arg Xaa Leu Gln Leu Leu Arg His Thr 275 280 285

<210> .1190

<211> 100

<212> PRT

<213> Homo sapiens

<400> 1190

Arg Pro Pro Ser Arg Trp Ser Trp Trp Gln Gly Lys Pro Thr Gly Gly
1 5 10 15

Val Cys Val Ala Ala Ala Arg Ser Ser Pro Ser Val Thr Ala Pro Thr  $20 \hspace{1cm} 25 \hspace{1cm} 30$ 

Ser Ser Asn Ala Leu Ala Tyr Leu His Ser Ser Ser Arg Pro Lys Arg 35 40 45

Pro Ala Trp Trp His Ser Val Pro Ala Arg Pro Leu Arg Gly Pro Arg 50 55 60

Thr Ala Met Ala Pro Thr Gly Val Ser Ala Cys Arg Arg Gln Lys Trp 65 70 75 80

Ala Pro His Ser Glu Gly Ala Ala Ala Val Gln Pro Gln Val Ala Leu 85 90 95

Ala Pro Gly Leu 100

<210> 1191

<211> 115

<212> PRT

<213> Homo sapiens

<400> 1191

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                                     1.0
Glu Asn Thr Ala Lys Thr Phe Met Thr Ser Cys Ile Thr Ala Phe Val
             20
Tyr Ile Phe Leu Thr Val Ile Ile Pro Thr Gly Thr Leu Thr Val Ala
Leu Leu Asn Val Gln Asn Leu Tyr Phe Arg Asn Asn Lys Lys Lys Asp
                         55
Thr Tyr Met Phe Pro Lys Gln Trp Cys Gly Glu Cys Val Arg Lys Thr
                     70
Asn Leu Ile Gly Ser Thr Asn Thr Lys Cys Ile Thr Asn Ala Pro Val
His Val Phe Val Leu Lys Arg Val Asn Glu Asp Leu Tyr Ile Ser Ile
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Asn Asp Ile
       115
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Phe Ser Asn Pro Arg Arg Pro Asp Arg Gly Thr Trp Ser Leu Ser Glu
            20
Lys Phe Asn Leu Arg Asp Lys Met Gln Trp Thr Ser Leu Leu Leu
                                                 45
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WO 00/55350

Ala	Gly 50		. Phe	e Ser	Leu	Ser 55		Ala	Glr	Tyr	60 60		Asp	Pro	His
Trp 65		Phe	His	Tyr	Leu 70		Ser	Glm	Gln	Ser 75		Tyr	туг	Asp	Pro 80
Tyr	Asp	Pro	туг	Pro 85	-	Glu	Thr	Tyr	Glu 90		туг	Pro	Туг	Gly 95	
Asp	Glu	Gly	Pro 100		Tyr	Thr	Tyr	Gly 105		Pro	Ser	Pro	Pro 110	-	Pro
Arg	Asp	Cys 115	Pro	Gln	Glu	Cys	Asp 120	-	Pro	Pro	Asn	Phe 125		Thr	Ala
	130		Asp	*		135					140				
145			Tyr		150					155					160
			Phe	165					170					175	
			11e 180		-		_	185	_	_	-		190		-
		195	Leu				200					205			
	210		Pro			215					220				
225			Ser		230					235					240
			Gly	245					250					255	
			260 Lys					265			_		270	_	
		275	His			_	280					285			
	290		Lys			295	-				300		•		
305			-4-		310	- 4 -		3		315					320

1211

Asn Asn Gly Leu Ala Ser Asn Thr Phe Asn Ser Ser Leu Leu Glu 330 Leu Asp Leu Ser Tyr Asn Gln Leu Gln Lys Ile Pro Pro Val Asn Thr 340 345 350 Asn Leu Glu Asn Leu Tyr Leu Gln Gly Asn Arg Ile Asn Glu Phe Ser 360 Ile Ser Ser Phe Cys Thr Val Val Asp Val Val Asn Phe Ser Lys Leu 375 Gln Val Leu Arg Leu Asp Gly Asn Glu Ile Lys Arg Ser Ala Met Pro 390 395 400 Ala Asp Ala Pro Leu Cys Leu Arg Leu Ala Ser Leu Ile Glu Ile 405 410 <210> 1193 <211> 620 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (375) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (501) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (532) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (546) <223> Xaa equals any of the naturally occurring L-amino acids <400> 1193 Ser Ala Val Thr Ala Phe Ser Glu Gly Ser Val Ile Ala Tyr Tyr Trp Ser Glu Phe Ser Ile Pro Gln His Leu Val Glu Glu Ala Glu Arg Val

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Lys	Ser 50	Phe	Val	Val	Thr	Ser 55		Val	Ala	Phe	Pro 60		Asp	Ser	Lys
Thr 65	Val	Gln	Arg	Thr	Gln 70	Asp	Asn	Ser	Cys	Ser 75		Gly	Leu	His	Ala 80
Arg	Gly	Val	Glu	Leu 85	Met	Arg	Phe	Thr	Thr 90	Pro	Gly	Phe	Pro	Asp 95	
Pro	Tyr	Pro	Ala 100	His	Ala	Arg	Cys	Gln 105	Trp	Ala	Leu	Arg	Gly 110	_	Ala
Asp	Ser	Val 115	Leu	Ser	Leu	Thr	Phe 120	Arg	Ser	Phe	Asp	Leu 125	Ala	Ser	Cys
Asp	Glu 130	Arg	Gly	Ser	Asp	Leu 135	Val	Thr	Val	Tyr	Asn 140	Thr	Leu	Ser	Pro
Met 145	Glu	Pro	His	Ala	Leu 150	Val	Gln	Leu	Cys	Gly 155	Thr	Tyr	Pro	Pro	Ser 160
Tyr	Asn	Leu	Thr	Phe 165	His	Ser	Ser	Gln	Asn 170	Val	Leu	Leu	Ile	Thr 175	Leu
Ile	Thr	Asn	Thr 180	Glu	Arg	Arg	His	Pro 185	Gly	Phe	Glu	Ala	Thr 190	Phe	Phe
Gln	Leu	Pro 195	Arg	Met	Ser	Ser	Cys 200	Gly	Gly	Arg	Leu	Arg 205	Lys	Ala	Gln
Gly	Thr 210	Phe	Asn	Ser	Pro	Tyr 215	Tyr	Pro	Gly	His	Tyr 220	Pro	Pro	Asn	Ile
Asp 225	Cys	Thr	Trp	Asn	Ile 230	Glu	Val	Pro	Asn	Asn 235	Gln	His	Val	Lys	Val 240
Arg	Phe	Lys	Phe	Phe 245	Tyr	Leu	Leu	Glu	Pro 250	Gly	Val	Pro	Ala	Gly 255	Thr
Сув	Pro	Lys	Asp 260	Tyr	Val	Glu	Ile	Asn 265	Gly	Glu	Lys	Tyr	Cys 270	Gly	Glu
Arg	Ser	Gln 275	Phe	Val	Val	Thr	Ser 280	Asn	Ser	Asn	Lys	Ile 285	Thr	Val	Arg
Phe	His	Ser	Asp	Gln	Ser	Tyr	Thr	Asp	Thr	Gly	Phe	Leu	Ala	Glu	Tyr

	290					295					300				
Leu 305	Ser	Tyr	Asp	Ser	Ser 310	Asp	Pro	Cys	Pro	Gly 315	Gln	Phe	Thr	Cys	Arg 320
Thr	Gly	Arg	Cys	11e 325	Arg	Lys	Glu	Leu	Arg 330	Cys	Asp	Gly	Trp	Ala 335	Asp
Cys	Thr	Asp	His 340	Ser	Asp	Glu	Leu	Asn 345	Cys	Ser	Cys	Asp	Ala 350	Gly	His
Gln	Phe	Thr 355	Cys	Lys	Asn	Lys	Phe 360	Cys	Lys	Pro	Leu	Phe 365	Trp	Val	Cys
Asp	Ser 370	Val	Asn	Asp	Cys	Xaa 375	Asp	Asn	Ser	Asp	Glu 380	Gln	Gly	Суѕ	Ser
Cys 385	Pro	Ala	Gln	Thr	Phe 390	Arg	Cys	Ser	Asn	Gly 395	Lys	Cys	Leu	Ser	Lys 400
Ser	Gln	Gln	Cys	Asn 405	Gly	Lys	Asp	Asp	Cys 410	Gly	Asp	Gly	Ser	Asp 415	Glu
Ala	Ser	Cys	Pro 420	Lys	Val	Asn	Val	Val 425	Thr	Cys	Thr	Lys	His 430	Thr	Tyr
Arg	Cys	Leu 435	Asn	Gly	Leu	Cys	Leu 440	Ser	Lys	Gly	Asn	Pro 445	Glu	Cys	Asp
Gly	Lys 450	Glu	Asp	Cys	Ser	Asp 455	Gly	Ser	Asp	Glu	Lys 460	Asp	Cys	Asp	Суѕ
Gly 465	Leu	Arg	Ser	Phe	Thr 470	Arg	Gln	Ala	Arg	Val 475	Val	Gly	Gly	Thr	Asp 480
Ala	Asp	Glu	Gly	Glu 485	Trp	Pro	Trp	Gln	Val 490	Ser	Leu	His	Ala	Leu 495	Gly
Gln	Gly	Thr	Ser 500	Xaa	Gly	Ala	Ser	Leu 505	Ile	Ser	Pro	Asn	Trp 510	Leu	Val
Ser	Ala	Ala 515	His	Cys	Tyr	Ile	Asp 520	Asp	Arg	Gly	Phe	Arg 525	Tyr	Ser	Asp
Pro	Thr 530	Gln	Xaa	Thr	Ala	Phe 535	Leu	Gly	Leu	His	Asp 540	Gln	Ser	Gln	Arg
ser 545	Xaa	Leu	Gly	Cys	Arg 550	Ser	Ala	Gly	Ser	Ser 555	Ala	Ser	Ser	Pro	Thr 560
Pro	Ser	Ser	Met	Thr	Ser	Pro	Ser	Thr	Met	Thr	Ser	Arg	Cys	Trp	Ser

570 565 575 Trp Arg Asn Arg Gln Ser Thr Ala Pro Trp Cys Gly Pro Ser Ala Cys 580 585 590 Arg Thr Pro Pro Met Ser Ser Leu Pro Ala Arg Pro Ser Gly Ser Arg 600 Ala Gly Asp Thr Pro Ser Met Glu Ala Leu Ala Arg 610 615 <210> 1194 <211> 51 <212> PRT <213> Homo sapiens <400> 1194 Arg Thr Leu Cys His Leu Thr Thr Leu Asp Glu Leu Ser Cys Gln Arg 5 10 Glu Asn Leu Met Phe Lys Glu His Phe Pro Leu Ala Asp Val Thr Ala 25 Gly Phe Val Phe His Met Cys Phe Ser Tyr Thr His Leu Asn Ala Phe 40 Lys His Leu 50 <210> 1195 <211> 269 <212> PRT <213> Homo sapiens -<220> <221> SITE <222> (245) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (246) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (257)

WO 00/55350

1215

PCT/US00/05882

< 22	3> x	aa e	qual	s an	y of	the	nat	ural	ly c	occur	ring	L-a	mino	aci	ds
<22 <22	0> 1> s	ITE													
<22	2> (	2661													
			qual	s an	y of	the	nat	ural	ly c	ccur	ring	L-a	mino	aci	ds
	0> 1		_			_									
Pro 1	Ala	Glu	Asp	Ala 5		Ser	Leu	Thr	Trp	Gly	Val	Ala	Ile	Arg 15	
Gly	Arg	Ser	Trp 20	Phe	Ser	Gly	Pro	Ala 25		Pro	Ala	Ala	Ala 30	Met	Ser
Phe	Phe	Pro 35		Leu	Tyr	Phe	Asn 40	Val	Asp	) Asn		Tyr . 45		Glu	Gly
Leu	Val 50	Arg	Gly	Leu	Lys	Ala 55	Gly	Val	Leu	Ser	Gln 60	Ala	Asp	Tyr	Leu
Asn 65	Leu	Val	Gln	Cys	Glu 70	Thr	Leu	Glu	Asp	Leu 75	Lys	Leu	His	Leu	Gln 80
Ser	Thr	Asp	Tyr	Gly 85	Asn	Phe	Leu	Ala	Asn 90	Glu	Ala	Ser	Pro	Leu 95	Thr
Val	Ser	Val	Ile 100	Asp	Asp	Arg	Leu	Lys 105	Glu	Lys	Met	Val	Val 110	Glų	Phe
Arg	His	Met 115	Arg	Asn	His	Ala	Tyr 120	Glu	Pro	Leu	Ala	Ser 125	Phe	Leu	Asp
Phe	11e 130	Thr	туг	Ser	Tyr	Met 135	Ile	Asp	Asn	Val	Ile 140	Leu	Leu	Ile	Thr
Gly 145	Thr	Leu	His	Gln	Arg 150	Ser	Ile	Ala	Glu	Leu 155	Val	Pro	Lys	Cys	His 160
Pro	Leu	Gly	Ser	Phe 165	Glu	Gln	Met	Glu	Ala 170	Val	Asn	Ile	Ala	Gln 175	Thr
Pro	Ala	Glu	Leu 180	Tyr	Asn	Ala	Ile	Leu 185	Val	Asp	Thr	Pro	Leu 190	Ala	Ala
Phe	Phe	Gln 195	Asp	Cys	Ile	Ser	Glu 200	Gln	Asp	Leu	Asp	Glu 205	Met	Asn	Ile
Glu	Ile 210	Ile	Arg	Asn	Thr	Leu 215	Tyr	Lys	Ala	Tyr	Leu 220	Glu	Ser	Phe	Tyr
Lys	Phe	Cys	Thr	Leu	Leu	Gly	Gly	Thr	Thr	Ala	Asp	Ala	Met	Cys	Pro

225	,				230	•				235	,				240
Ile	. Leu	Glu	Phe	245		Gln	Thr	Val	. Pro		Ser	Phe	His	255	
Xaa	Gly	Ser	Thr 260		Arg	Ala	Trp	Arg 265		Gly	Ser	Gly	•		
<21 <21	0> 1 1> 3 2> P 3> H	01 RT	sapi	ens		*					ļ	:			
< 40	0> 1	196													
Arg 1		Glu	Pro	Ala 5		Arg	Glu	Ala	Pro 10			Arg	Ala	Ser 15	
Phe	Leu	Leu	Pro 20	Ser	Phe	Leu	Pro	Gly 25		Arg	Leu	Val	Pro 30		Gly
His	Pro	Thr 35	Ala	Thr	Met	Phe	Val 40	Pro	Cys	Gly	Glu	Ser 45	Ala	Pro	Asp
Leu	Ala 50	Gly	Phe	Thr	Leu	Leu 55	Met	Pro	Ala	Val	Ser 60	Val	Gly	Asn	Val
Gly 65	Gln	Leu	Ala	Met	Asp 70	Leu	Ile	Ile	Ser	Thr 75	Leu	Asn	Met	Ser	Lys
Ile	Gly	Tyr	Phe	Tyr 85	Thr	Asp	Cys	Leu	Val 90	Pro	Met	Val	Gly	Asn 95	Asn
Pro	туг	Ala	Thr 100	Thr	Glu	Gly	Asn	Ser 105	Thr	Glu	Leu	Ser	Ile 110	Asn	Ala
Glu	Val	Tyr 115	Ser	Leu	Pro	Ser	Arg 120	Lys	Leu	Val	Ala	Leu 125	Gln	Leu	Arg
Ser	Ile 130	Phe	Ile	Lys	Tyr	Lys 135	Ser	Lys	Pro	Phe	Cys 140	Glu	Lys	Leu	Leu
Ser 145	Trp	Val	Lys	Ser	Ser 150	Gly	Cys	Ala	Arg	Val 155	Ile	Val	Leu	Ser	Ser 160
Ser	His	Ser	туr	Gln 165	Arg	Asn	Asp	Leu	Gln 170	Leu	Arg	Ser	Thr	Pro 175	Phe
Arg	Tyr						Met		-					-	Ile

1217

Lys Ser Leu Asn Trp Glu Glu Met Glu Lys Ser Arg Cys Ile Pro Glu 200 Ile Asp Asp Ser Glu Phe Cys Ile Arg Ile Pro Gly Gly Gly Ile Thr 210 215 220 Lys Thr Leu Tyr Asp Glu Ser Cys Ser Lys Glu Ile Gln Met Ala Val 225 Leu Leu Lys Phe Val Ser Glu Gly Asp Asn Ile Pro Asp Ala Leu Gly 245 250 Leu Val Glu Tyr Leu Asn Glu Trp Leu Gln Ile Leu Lys Pro Leu Ser 265 Asp Asp Pro Thr Val Ser Ala Ser Arg Trp Lys Ile Pro Ser Ser Trp 280 Arg Leu Leu Phe Gly Ser Gly Leu Pro Pro Ala Leu Phe 290 295 <210> 1197 <211> 246 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (49) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (65) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (230) <223> Xaa equals any of the naturally occurring L-amino acids <400> 1197 Gly Thr Arg Asp Leu Leu Ala Ala Ala Ala Thr Gly Lys Leu Lys Ser Phe Ala Arg Lys Phe Ile Asn Leu Asn Glu Phe Thr Thr Tyr 20 25

Gly	Ser	Glu 35		Ser	Thr	Lys	Pro 40		Ser	· Val	Arg	Ala 45		Leu	Phe
Xaa	Ile 50		Phe	Leu	Met	Leu 55		His	Val	Ala	Gln 60	Thr	Туг	Gly	Ser
Xaa 65	Val	Ile	Leu	Ser	Glu 70		Arg	Thr	Gly	Ala 75	Glu	Val	Pro	Phe	Phe 80
Glu	Thr	Trp	Met	Gln 85		Cys	Met	Pro	Glu 90		Gly	Lys	Ile	Leu 95	Asn
Pro	Asp	His	Pro 100	Cys	Phe	Arg	Pro	Asp 105	Ser	Thr	Lys	Val	Glu 110	Ser	Leu
		115					120			Lys		125			_
	130					135				Ala	140				
145			٠		150					Glu 155				_	160
				165					170	Leu				175	
			180					185		Gly			190		
		195					200			Gly		205			
	210					215					220				
Leu 225	GLY	ALA	His	Val	Xaa 230	Arg	Arg	Ala	Ala	Ala 235	Asp	Ser	His	Ala	Gly 240

Phe Lys Phe Pro Ser Asn 245

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<211> 465

<212> PRT

<213> Homo sapiens

<220>

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<22	2> (	460)													
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<22	0>														
<22	1> s	ITE													
<22	2> (	461)													
<22	3> X	aa e	qual	s an	y of	the	nat	ural	ly c	ccur	ring	L-a	mino	aci	ds
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Lys	Asn	Met	Glu	Thr	Glu	Gln	Pro	Glu	Glu	Thr	Phe	Pro	Asn	Thr	Glu
1				5					10					15	
Thr	Asn	Gly	Glu	Phe	Gly	Lys	Arg	Pro	Ala	Glu	Asp	Met	Glu	Glu	Glu
			20					25					30		
					_										
Gin	Ala	Phe 35	Lys	Arg	Ser	Arg	Asn 40	Thr	Asp	Glu	Met	Val 45	Glu	Leu	Arg
		33					40					45			
Ile	Leu	Leu	Gln	Ser	Lys	Asn	Ala	Gly	Ala	Val	Ile	Gly	Lys	Gly	Gly
	50					55		_			60	_	•	_	•
	Asn	Ile	Lys	Ala		Arg	Thr	Asp	Tyr		Ala	Ser	Val	Ser	
65					70					75					80
Pro	Asp	Ser	Ser	Glv	Pro	Glu	Arg	Ile	Leu	Ser	Ile	Ser	Ala	Asp	Ile
	•			85			5		90					95	
Glu	Thr	Ile		Glu	Ile	Leu	Lys	Lys	Ile	Ile	Pro	Thr	Leu	Glu	Glu
			100					105					110		
Glu	Lon	C1-	T OU	Bro	cor	Dra	mb =	212	mb -	C	Cl.	T 0	D=0	T 0.1	G2
Gry	Leu	115	Leu	PIO	361	PLO	Thr 120	MId	Int	ser	GIII	125	PIO	reu	GIU
							120					123			
Ser	Asp	Ala	Val	Glu	Cys	Leu	Asn	Tyr	Gln	His	Tyr	Lys	Gly	Ser	Asp
	130					135					140				
	Asp	Cys	Glu	Leu		Leu	Leu	Ile	His		Ser	Leu	Ala	Gly	_
145					150					155					160
Ile	Ile	Glv	Val	Lvs	Glv	Ala	Lys	Tle	Lvs	Glu	Leu	Ara	Glu	Asn	Thr
				165	1		-,-		170			9		175	
Gln	Thr	Thr		Lys	Leu	Phe	Gln	Glu	Cys	Cys	Pro	His	Ser	Thr	Asp
			180					185					190		
Ara	Val	Va1	Leu	Tle	Glv	Glv	Lys	Pro	Aer	Yaz	va 1	Val	Glo	Cve	Tle
9					I		-13	4 10	~op	nua	* 44 1	* 4 7	- L U	-10	* T-C

		195	i				200					205	•		
Lys	Ile 210		. Leu	Asp	Leu	Ile 215		Glu	Ser	Pro	11e 220		Gly	Arg	Ala
Gln 225		Tyr	Asp	Pro	Asn 230		Tyr	Asp	Glu	Thr 235		Asp	Tyr	Gly	Gly 240
Phe	Thr	Met	Met	Phe 245		Asp	Arg	Arg	Gly 250	Arg	Pro	Val	Gly	Phe 255	Pro
Met	Arg	Gly	Arg 260		Gly	Phe	Asp	Arg 265	Met	Pro	Pro	Gly	Arg 270	_	Gly
Arg	Pro	Met 275	Pro	Pro	Ser	Arg	Arg 280	Asp	Туr	Asp	Asp	Met 285	Ser	Pro	Arg
Arg	Gly 290	Pro	Pro	Pro	Pro	Pro 295	Pro	Gly	Arg	Gly	Gly 300	Arg	Gly	Gly	Ser
Arg 305	Ala	Arg	Asn	Leu	Pro 310	Leu	Pro	Pro	Pro	Pro 315	Pro	Pro	Arg	Gly	Gly 320
Asp	Leu	Met	Ala	Tyr 325	Asp	Arg	Arg	Gly	Arg 330	Pro	Gly	Asp	Arg	туr 335	Asp
Gly	Met	Val	Gly 340	Phe	Ser	Ala	Asp	Glu 345	Thr	Trp	Asp	Ser	Ala 350	Ile	Asp
Thr	Trp	Ser 355	Pro	Ser	Glư	Trp	Gln 360	Met	Ala	туг	Glu	Pro 365	Gln	Gly	Gly
Ser	Gly 370	Tyr	Asp	Tyr	Ser	Туг 375	Ala	Gly	Gly	Arg	Gly 380	Ser	Tyr	Gly	Asp
Leu 385	Gly	Gly	Pro	Ile	11e 390	Thr	Thr	Gln	Val	Thr 395	Ile	Pro	Lys	Asp	Leu 400
Ala	Gly	Ser	Ile	11e 405	Gly	Lys	Gly	Gly	Gln 410	Arg	Ile	Lys	Gln	Ile 415	Arg
His	Glu	Ser	Gly 420	Ala	Ser	Ile	Lys	11e 425	Asp	Glu	Pro	Leu	Glu 430	Gly	Ser
Glu	Asp	Arg 435	Ile	Ile	Thr	Ile	Thr 440	Gly	Thr	Gln	Asp	Gln 445	Ile	Gln	Asn
	Gln 450	Tyr	Leu	Leu		Asn 455	Ser	Val	Ser	Ser	Xaa 460	Xaa	Leu	Ala	Leu
Cys															

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<210> 1199
<211> 446
<212> PRT
<213> Homo sapiens
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<220>
<221> SITE
<222> (88)
<223> Xaa equals any of the naturally occurring L-amino acids
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                                    10
Arg Pro His Glu Met Asp Gln Tyr Trp Gly Ile Gly Ser Leu Ala Ser
Gly Ile Asn Leu Phe Thr Asn Ser Phe Glu Gly Pro Val Leu Asp His
                    40
Arg Tyr Tyr Ala Gly Gly Cys Ser Pro His Tyr Ile Leu Asn Thr Arg
Phe Arg Lys Pro Tyr Asn Val Glu Ser Tyr Thr Pro Gln Thr Gln Gly
                                        75
Lys Tyr Glu Phe Ile Leu Xaa Xaa Tyr Glu Ser Tyr Ser Asp Phe Glu
                85
                                    90
Arg Asn Val Thr Glu Lys Met Ala Ser Lys Ser Gly Phe Ser Phe Gly
                               105
Phe Lys Ile Pro Gly Ile Phe Glu Leu Gly Ile Ser Ser Gln Ser Asp
       115
Arg Gly Lys His Tyr Ile Arg Arg Thr Lys Arg Phe Ser His Thr Lys
                       135
                                           140
```

145		L File	: ner	י הוצ	150		, ser	ASE	Let	155		L Alá	a Hls	тул	160
Leu	Lys	Pro	Arg	Ser 165	Leu	Met	. Leu	His	170		ı Phe	e Lei	ı Glr	175	
Lys	Arg	Leu	Pro 180		Glu	Tyr	Ser	Tyr 185		, Glu	Туг	Arg	190		Phe
Arg	Asp	Phe 195		Thr	His	туг	1le 200		Glu	ı Ala	val	. Leu 205		Gly	Ile
туг	Glu 210		Thr	Leu	Val	Met 215		Lys	Glu	Ala	Met 220		Arg	Gly	Asp
Tyr 225		Leu	Asn	Asn	Val 230	His	Ala	Cys	Ala	Lys 235		Asp	Phe	Lys	Ile 240
Gly	Gly	Ala	Ile	Glu 245	Glu	Val	Tyr	Val	Ser 250		Gly	Val	Ser	Val 255	
Lys	Cys	Arg	Gly 260		Leu	Asn	Glu	Ile 265		Asp	Arg	Asn	Lys 270	Arg	Asp
Thr	Met	Val 275	Glu	Asp	Leu	Val	Val 280	Leu	Val	Arg	Gly	Gly 285	Ala	Ser	Glu
His	Ile 290	Thr	Thr	Leu	Ala	Tyr 295	Gln	Glu	Leu	Pro	Thr 300	Ala	Asp	Leu	Met
Gln 305	Glu	Trp	Gly	Asp	Ala 310	Val	Gln	Tyr	Asn	Pro 315	Ala	Ile	Ile	Lys	Val 320
Lys	Val	Glu	Pro	Leu 325	Tyr	Glu	Leu	Val	Thr 330	Ala	Thr	Asp	Phe	Ala 335	Tyr
			340		Gln			345					350		
		355			Сув		360					365			
•	370				Ser	375					380				-
385					Glu 390					395					400
Gly	Lys	Trp	Asn	Cys 405	Trp	Ser	Asn	Trp	Ser 410	Ser	Cys	Ser	Gly	Arg 415	Arg

1223

Lys Thr Arg Gln Arg Gln Cys Asn Asn Pro Pro Pro Gln Asn Gly Gly
420 425 430

Ser Pro Cys Ser Gly Pro Ala Ser Glu Thr Leu Asp Cys Ser 435 440 445

<210> 1200

<211> 437

<212> PRT

<213> Homo sapiens

<400> 1200

Leu Gly Ser Ser Asp Ser Tyr Ala Ser Pro Gly Arg Ala Ala Ala Pro 1 5 10 15

Pro Ala Ala Ala Gly Pro Gly Asp Thr Ser Ala Cys Tyr Lys Ser Ser 20 25 30

Gly Pro Arg Cys Leu Leu Pro Asp Leu Ala Pro Ser Ser Glu Pro Gly

Ala Cys Leu Gly Gly Leu Ser Val Phe Thr Met Glu Gln Leu Ser Ser 50 55 60

Ala Asn Thr Arg Phe Ala Leu Asp Leu Phe Leu Ala Leu Ser Glu Asn 65 70 75 80

Met Ala Met Val Phe Leu Gly Thr Arg Gly Asn Thr Ala Ala Gln Leu 100 105 110

Ser Lys Thr Phe His Phe Asn Thr Val Glu Glu Val His Ser Arg Phe 115 120 125

Gln Ser Leu Asn Ala Asp Ile Asn Lys Arg Gly Ala Ser Tyr Ile Leu 130 135 140

Lys Leu Ala Asn Arg Leu Tyr Gly Glu Lys Thr Tyr Asn Phe Leu Pro 145 150 155 160

Glu Phe Leu Val Ser Thr Gln Lys Thr Tyr Gly Ala Asp Leu Ala Ser 165 170 175

Val Asp Phe Gln His Ala Ser Glu Asp Ala Arg Lys Thr Ile Asn Gln 180 185 190

irb Agr TAR	GIA GTU	Thr Glu	GIŞ	Lys	He	Pro	GLu	Leu	Leu	Ala	Ser
195	•		200					205			

Gly Met Val Asp Asn Met Thr Lys Leu Val Leu Val Asn Ala Ile Tyr 210 215 220

Phe Lys Gly Asn Trp Lys Asp Lys Phe Met Lys Glu Ala Thr Thr Asn 225 230 235 240

Ala Pro Phe Arg Leu Asn Lys Lys Asp Arg Lys Thr Val Lys Met Met 245 250 255

Tyr Gln Lys Lys Lys Phe Ala Tyr Gly Tyr Ile Glu Asp Leu Lys Cys 260 265 270

Arg Val Leu Glu Leu Pro Tyr Gln Gly Glu Glu Leu Ser Met Val Ile 275 280 285

Leu Leu Pro Asp Asp Ile Glu Asp Glu Ser Thr Gly Leu Lys Lys Ile 290 295 300

Glu Glu Gln Leu Thr Leu Glu Lys Leu His Glu Trp Thr Lys Pro Glu 305 310 315 320

Asn Leu Asp Phe Ile Glu Val Asn Val Ser Leu Pro Arg Phe Lys Leu 325 330 335

Glu Glu Ser Tyr Thr Leu Asn Ser Asp Leu Ala Arg Leu Gly Val Gln 340 345 350

Asp Leu Phe Asn Ser Ser Lys Ala Asp Leu Ser Gly Met Ser Gly Ala 355 360 365

Arg Asp Ile Phe Ile Ser Lys Ile Val His Lys Ser Phe Val Glu Val 370 375 380

Asn Glu Glu Gly Thr Glu Ala Ala Ala Ala Thr Ala Gly Ile Ala Thr 385 390 395 400

Phe Cys Met Leu Met Pro Glu Glu Asn Phe Thr Ala Asp His Pro Phe 405 410 415

Leu Phe Phe Ile Arg His Asn Ser Ser Gly Ser Ile Leu Phe Leu Gly
420 425 430

Arg Phe Ser Ser Pro 435

<210> 1201

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<211> 82
<212> PRT
<213> Homo sapiens
<220>
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<400> 1201
Gln Leu Gly Pro Val Val Gly Gly Trp Tyr Lys Val Leu Asp Arg Phe
                                  10 , 15
Ile Pro Gly Thr Thr Lys Val Asp Ala Leu Lys Lys Met Leu Leu Asp
                               25
Gln Gly Gly Phe Ala Pro Cys Phe Leu Gly Cys Phe Leu Pro Leu Val
                           40
Gly Ala Leu Asn Gly Leu Ser Ala Gln Asp Asn Trp Pro Asn Tyr Ser
                        55
Gly Ile Ile Leu Met Pro Leu Ser Pro Thr Thr Ile Tyr Gly Leu Leu
                  70
Cys Xaa
<210> 1202
<211> 126
<212> PRT
<213> Homo sapiens
<400> 1202
Ile Ser Arg Ser Ser Ala Arg Arg Gln Pro Phe Arg His Gly Arg Leu
Trp Arg Ala Ala Met Ala Leu Arg Tyr Pro Met Ala Val Gly Leu
                              25
Asn Lys Gly His Lys Val Thr Lys Asn Val Ser Lys Pro Arg His Ser
       35
                           40
Arg Arg Arg Gly Arg Leu Thr Lys His Thr Lys Phe Val Arg Asp Met
                       55
Ile Arg Glu Val Cys Gly Phe Ala Pro Tyr Glu Arg Arg Ala Met Glu
                  70
                          75
```

Leu Leu Lys Val Ser Lys Asp Lys Arg Ala Leu Lys Phe Ile Lys Lys 90 Arg Val Gly Thr His Ile Arg Ala Lys Arg Lys Arg Glu Glu Leu Ser 105 Asn Val Leu Ala Ala Met Arg Lys Ala Ala Ala Lys Lys Asp 115 120 125 <210> 1203 <211> 130 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (27) <223> Kaa equals any of the naturally occurring L-amino acids Asp Trp Asn Pro Asp Leu Gln Ala Ser Ala Val Cys Ile Lys Arg Val Gly Glu Ser Gly Pro Leu Ala Gln Glu Pro Xaa Leu Leu Lys Glu Gly Phe Lys Ala Lys Trp Val Cys Gln Arg Cys Cys Leu Pro Phe Leu Glu 35 Met Leu Ile Ser Leu Ser Lys Thr Glu Lys Ser Arg Cys Tyr Arg Asn 55 Asn Leu Val Cys Cys Ile Asn Cys Ser Trp Ala Trp Ser Ser Ile Pro

Pro Ser Leu Ser Ser Pro Gly Asn Ser Leu Ala Glu Gly Gly Asp Pro 115 120 125

Thr Leu Arg Phe Pro Ala Ser Leu Cys Cys Pro Gly Ser His Ser Cys

Arg Arg Pro Asn Pro Leu Ala Val Phe Cys Leu Lys Ile Trp Gly Ala 100 105 110

Pro Gln 130

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<210> 1204
<211> 228
<212> PRT
<213> Homo sapiens
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<220>
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<222> (196)
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<220>
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<222> (199)
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<220>
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<222> (225)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
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<400> 1204
Trp Ala Ala Phe Glu Pro Ala Thr Leu Ala Trp Lys Phe Pro Phe Gln
 1
                  5
                                     10
Ser Gly Phe Cys Leu Leu Pro Ser Pro Ser Pro Arg Tyr Leu Phe
Thr Ser His Leu Ile Ser Leu Cys Ser Ser Val Ser Pro Thr His Ile
                            40
Ile Gly Asp Ser Gly Gly Ser Leu Thr Ser Leu Leu Ser Asn Ala Arg
     50
                         55
Pro Ser Gly Leu Ala Ser Val Ala Ser His Ile Asp Val Thr Leu Glu
                     70
Leu Leu Pro Gln Arg Gly Arg Arg Asp Arg Leu Ser Pro His Leu Pro
                 85
Pro Tyr Ser Pro Leu Tyr Ser Arg Phe Asp His Leu Ser Pro Ser Ala
           100
                                105
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Ala Pro Ser His Phe Gly Gln Ser Gln Ala Pro Ile Arg Leu Pro Pro 120 Pro Pro Gly Ala Pro Ser Ile Ser Leu Ser Pro Leu Pro Gln Asn Leu 135 Cys Lys Gly Tyr Glu Arg Asp Pro Leu Pro Ser Arg Pro Pro Leu Arg 150 155 Ala Val Arg Ser Lys Lys Gln Lys Leu Val Gly Gly Trp Leu Gly Leu 170 Cys Pro Val Pro Arg Trp Asp Lys Leu Ala Phe Ser Xaa Ile Pro Ser 180 Trp Val Pro Xaa Ser Phe Xaa Ala Pro Gly Ala Arg Thr His Cys Ala 200 Val Phe Leu Phe Ser Phe Val-Gly Lys Gly Thr Lys Val Phe Ala Lys 215 Xaa Pro Val Xaa 225 <210> 1205 <211> 270 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (128) <223> Xaa equals any of the naturally occurring L-amino acids <400> 1205 Leu Pro Gly Ala Val Ala Ala Ser Ser Gly Ser Pro Pro Gly Ser Ala 10 Leu Ala Ala Val Ala Ser Gly Gly Asp Leu Phe Pro Gly Gln Pro Val Ser Glu Leu Ile Ala Gln Leu Leu Arg Ala Glu Pro Tyr Pro Ala Ala

Ala Gly Arg Phe Gly Ala Gly Gly Gly Ala Ala Gly Ala Val Leu Gly

Ile Asp Asn Val Cys Glu Leu Ala Ala Arg Leu Leu Phe Ser Thr Val

55

1229

65 70 75 80 Glu Trp Ala Arg His Ala Pro Phe Phe Pro Glu Leu Pro Val Ala Asp 85 90 Gln Val Ala Leu Leu Arg Leu Ser Trp Ser Glu Leu Phe Val Leu Asn 105 Ala Ala Gln Ala Ala Leu Pro Leu His Thr Ala Pro Leu Leu Ala Xaa 120 Ala Gly Leu His Ala Ala Pro Met Ala Ala Glu Arg Ala Val Ala Phe 135 Met Asp Gln Val Arg Ala Phe Gln Glu Gln Val Asp Lys Leu Gly Arg 150 Leu Gln Val Asp Ser Ala Glu Tyr Gly Cys Leu Lys Ala Ile Ala Leu Phe Thr Pro Asp Ala Cys Gly Leu Ser Asp Pro Ala His Val Glu Ser Leu Gln Glu Lys Ala Gln Val Ala Leu Thr Glu Tyr Val Arg Ala Gln 195 200 Tyr Pro Ser Gln Pro Gln Arg Phe Gly Arg Leu Leu Arg Leu Pro 215 Ala Leu Arg Ala Val Pro Ala Ser Leu Ile Ser Gln Leu Phe Phe Met 225 Arg Leu Val Gly Lys Thr Pro Ile Glu Thr Leu Ile Arg Asp Met Leu 250 Leu Ser Gly Ser Thr Phe Asn Trp Pro Tyr Gly Ser Gly Gln 265 <210> 1206 <211> 89 <212> PRT <213> Homo sapiens <400> 1206 Met Phe His Cys Ser Asp Lys Tyr Phe Thr Phe Phe Ser Val His Gln Arg Glu Arg Asp Pro Pro Thr Ala Val Thr Ser Lys Cys Ser Cys Ser 20 25

Ile Asn Gly Val Thr Asp Thr Glu Val His Ser Trp Phe Leu Ser Arg
35 40 45

Val Val Ile Leu Val Ser Trp Ser Leu Gly His Trp Gly Cys Thr Leu 50 55 60

Lys Ser Pro Asn Arg Leu Ala Ile Lys Ile Asn Lys Ala Ala Ala Pro 65 70 75 80

Phe Gln Phe Thr Phe His Leu Thr Gln 85

<210> 1207

<211> 145

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (137)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 1207

Cys Val Gly Lys Ala Gly Val Glu Leu Gly Cys Ser Gly Glu Gly Val

Val Lys Lys Ala Ser Ser Arg Gly His Lys Ala Arg Phe Pro Leu Arg

Ser His Lys Val Leu Ser Pro Ala Pro Gly Ala Gly Gly Val His Gly 35 40 45

Pro Gly Phe Thr Ser Thr His Pro Ala His Pro Arg Gly Glu Gly Pro 50  $\phantom{-}55\phantom{+}\phantom{0}$ 

Arg Ala Pro Gly Pro Ala Ala Asp Arg Ile Leu Cys Lys Leu Cys Ser 65 70 75 80

Val His Cys Lys Thr Pro Ala Gln Leu Ala Gly His Met Gln Thr His 85 90 95

Leu Gly Gly Ala Ala Pro Leu Ser Arg Glu Thr Pro Pro Ser His Ser

Pro Pro Ala Glu Gly Asp Pro Arg Thr His Gln Val Leu Val Arg Phe 115 120 125

Val Gln Trp Arg Arg Gln Arg Gln Xaa Arg Gln Arg Gln Gln Arg Gln

1231

130 135 140 Gln 145 <210> 1208 <211> 378 <212> PRT <213> Homo sapiens <400> 1208 Ser Ala Ser Arg Ala Thr Ala Met Ser Ser Arg Gly Gly Lys Lys 1.0 Ser Thr Lys Thr Ser Arg Ser Ala Lys Ala Gly Val Ile Phe Pro Val Gly Arg Met Leu Arg Tyr Ile Lys Lys Gly His Pro Lys Tyr Arg Ile Gly Val Gly Ala Pro Val Tyr Met Ala Ala Val Leu Glu Tyr Leu Thr Ala Glu Ile Leu Glu Leu Ala Gly Asn Ala Ala Arg Asp Asn Lys Lys 75 Gly Arg Val Thr Pro Arg His Ile Leu Leu Ala Val Ala Asn Asp Glu Glu Leu Asn Gln Leu Leu Lys Gly Val Thr Ile Ala Ser Gly Gly Val 100 105 Leu Pro Asm Ile His Pro Glu Leu Leu Ala Lys Lys Arg Gly Ser Lys Gly Lys Leu Glu Ala Ile Ile Thr Pro Pro Pro Ala Lys Lys Ala Lys 135 Ser Pro Ser Gln Lys Lys Pro Val Ser Lys Lys Ala Gly Gly Lys Lys 145 150 155 Gly Ala Arg Lys Ser Lys Lys Gln Gly Glu Val Ser Lys Ala Ala Ser 170 Ala Asp Ser Thr Thr Glu Gly Thr Pro Ala Asp Gly Phe Thr Val Leu 180 Ser Thr Lys Ser Leu Phe Leu Gly Gln Lys Leu Asn Leu Ile His Ser 195 200 205

c	3lu	11e 210	Ser	Asn	Leu	Ala	Gly 215		Glu	Val	Glu	Ala 220	Ile	Ile	Asn	Pr
	hr 25	Asn	Ala	Asp	Ile	Asp 230	Leu	Lys	Asp	Asp	Leu 235	Gly	Asn	Thr		G1:
Ι	ys	Lys	Gly	Gly	Lys 245	Glu	Phe	Val	Glu	Ala 250	Val	Leu	Glu	Leu	Arg 255	Lys
I	.ys	Asn	Gly	Pro 260	Leu	Glu	Val	Ala	Gly 265		Ala	Val	Ser	Ala 270	Gly	His
G	ìу		Pro 275	Ala	Lys	Phe	Val	Ile 280		Cys	Asn	Ser	Pro 285	Val	Trp	Gly
A	la	Asp 290	Lys	Cys	Glu	Glu	Leu 295	Leu	Glu	Lys	Thr	Val 300	Lys	Asn	Cys	Leu
	1a 05	Leu	Ala	Asp	-	Lys 310	Lys	Leu	Lys	Ser	Ile 315	Ala	Phe	Pro	Ser	11e 320
G	ly	Ser	Gly	Arg	Asn .325	Gly	Phe	Pro	Lys	Gln 330	Thr	Ala	Ala	Gln	Leu 335	Ile
L	eu	Lys	Ala	11e 340	Ser	ser	Tyr		Val 345	Ser	Thr	Met	Ser	Ser 350	Ser	Ile
L	ys	Thr	Val 355	Tyr	Phe	Val	Leu	Phe 360	Asp	Ser	Glu	Ser	11e 365	Gly	Ile	Tyr
V	al	Gln 370	Glu	Met	Ala	Lys	Leu 375	Asp	Ala	Asn						
<	210	)> 12	209													
		> 22														
		?> PF }> Hc		apie	ns											
	220															
		.> \$1 !> (6														
			•	juals	any	of	the-	natu	rall	у. ос	curr	ing	L-am	ino	acid	s
<	220	)>														
		> si	TE													
		> (1		_		_										
<	223	> Xa	a eq	uals	any	of	the	natu	rall	у ос	curr	ıng	L-am	Ino	acid	s

1233

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<210> 1210

<211> 231 <212> PRT <213> Homo sapiens <400> 1210 Ala Leu Ser Pro Ala Met Val Val Pro Glu Asp Gln Leu Thr Arg Trp His Pro Arg Phe Asn Val Asp Glu Val Pro Asp Ile Glu Pro Ala Ala 25 Leu Pro Gln Pro Pro Ala Thr Glu Lys Leu Thr Thr Ala Gln Glu Val Leu Ala Arg Ala Arg Asn Leu Ile Ser Pro Arg Met Glu Lys Ala Leu Ser Gln Leu Ala Leu Arg Ser Ala Ala Pro Ser Ser Pro Gly Ser Pro 65 70 Arg Pro Ala Leu Pro Ala Thr Pro Pro Ala Thr Pro Pro Ala Ala Ser Pro Ser Ala Leu Lys Gly Val Ser Gln Asp Leu Leu Glu Arg Ile Arg 105 Ala Lys Glu Ala Gln Lys Gln Leu Ala Gln Met Thr Arg Cys Pro Glu 115 Gln Glu Gln Arg Leu Gln Arg Leu Glu Arg Leu Pro Glu Leu Ala Arg Val Leu Arg Ser Val Phe Val Ser Glu Arg Lys Pro Ala Leu Ser Met 145 150 155 Glu Val Ala Cys Ala Arg Met Val Gly Ser Cys Cys Thr Ile Met Ser Pro Gly Glu Met Glu Lys His Leu Leu Leu Ser Glu Leu Leu Pro 185 Asp Trp Leu Ser Leu His Arg Ile Arg Thr Asp Thr Tyr Val Lys Leu 195 Asp Lys Ala Ala Asp Leu Ala His Ile Thr Ala Arg Leu Ala His Gln

225

Thr Arg Ala Glu Glu Gly Leu

WO 00/55350

1235

PCT/US00/05882

<21 <21	0> 1 1> 3 2> P 3> H	46	sapi	ens											
			Thr	Ile 5		Leu	Val	Туг	Leu 10		Phe	Val	Phe	Tyr 15	Asn
Ser	Tyr	Ser	Leu 20	Phe	Pro	Ser	Lys	Glu 25	Asn	Cys	Val	Tyr	Glu 30	Thr	Val
Val	Leu	Pro 35	Leu	Asp	Glu	Arg	Ala 40		Glu	Lys	Thr	Leu 45	Thr	Pro	Ile
Ile	Gln 50	Glu	Туr	Phe	Glu	His 55	Gly	Asp	Thr	Asn	Glu 60	Val	Ala	Glu	Met
Leu 65	Arg	Asp	Leu	Asn	Leu 70	Gly	Glu	Met	Lys	Ser 75	Gly	Val	Pro	Val	Leu 80
Ala	Val	Ser	Leu	Ala 85	Leu	Glu	Gly	Lys	Ala 90	Ser	His	Arg	Glu	Met 95	Thr
Ser	Lys	Leu	Leu 100	Ser	Asp	Leu	Cys	Gly 105	Thr	Val	Met	Ser	Thr 110	Thr	Asp
Val	Glu	Lys 115	Ser	Phe	Asp	Lys	Leu 120	Leu	Lys	Asp	Leu	Pro 125	Glu	Leu	Ala
Leu	Asp 130	Thr	Pro	Arg	Ala	Pro 135	Gln	Leu	Val	Gly	Gln 140	Phe	Ile	Ala	Arg
Ala 145	Val	Gly	Asp	Gly	Ile 150	Leu	Cys	Asn	Thr	Туг 155	Ile	Asp	Ser	туr	Lys 160
Gly	Thr	Val	Asp	Cys 165	Val	Gln	Ala	Arg	Ala 170	Ala	Leu	Asp	Lys	<b>Ala</b> 175	Thr
Val	Leu	Leu	Ser 180	Met	Ser	Lys	Gly	Gly 185	Lys	Arg	Lys	Asp	Ser 190	Val	Trp
Gly	Ser	Gly 195	Gly	Gly	Gln	Gln	Ser 200	Val	Asn	His	Leu	Val 205	Lys	Glu	Ile
Asp	Met 210	Leu	Leu	Lys	Glu	Tyr 215	Leu	Leu	Ser	Gly	Asp 220	Ile	Ser	Glu	Ala
31u 225	His	Cys	Leu	Lys	Glu 230	Leu	Glu	Val	Pro	His 235	Phe	His	His	Glu	Leu 240

Val Tyr Glu Ala Ile Ile Met Val Leu Glu Ser Thr Gly Glu Ser Thr 250 Phe Lys Met Ile Leu Asp Leu Leu Lys Ser Leu Trp Lys Ser Ser Thr 265 270 Ile Thr Val Asp Gln Met Lys Arg Gly Tyr Glu Arg Ile Tyr Asn Glu 280 Ile Pro Asp Ile Asn Leu Asp Val Pro His Ser Tyr Ser Val Leu Glu 295 300 Arg Phe Val Glu Glu Cys Phe Gln Ala Gly Ile Ile Ser Lys Gln Leu 305 315 Arg Asp Leu Cys Pro Ser Arg Gly Arg Lys Arg Phe Val Ser Glu Gly 325 Asp Gly Gly Arg Leu Lys Pro Glu Ser Tyr 340 <210> 1212 <211> 175 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (3) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (63) <223> Xaa equals any of the naturally occurring L-amino acids <400> 1212 Pro Arg Xaa Ile Val Ser Ala Ala Cys Gly Arg Asn His Thr Leu Ala Leu Thr Glu Thr Gly Ser Val Phe Ala Phe Gly Glu Asn Lys Met Gly 25 Gln Leu Gly Leu Gly Asn Gln Thr Asp Ala Val Pro Ser Pro Ala Gln Ile Met Tyr Asn Gly Gln Pro Ile Thr Lys Met Ala Cys Gly Xaa Glu 50 55

1237

Phe Ser Met Ile Met Asp Cys Lys Gly Asn Leu Tyr Ser Phe Gly Cys

7.0

Pro Glu Tyr Gly Gln Leu Gly His Asn Ser Asp Gly Lys Phe Ile Ala Arg Ala Gln Arg Ile Glu Tyr Asp Cys Glu Leu Val Pro Arg Arg Val Ala Ile Phe Ile Glu Lys Thr Lys Asp Gly Gln Ile Leu Pro Val Pro 120 Asn Val Val Val Arg Asp Val Ala Cys Gly Ala Asn His Thr Leu Val 130 Leu Asp Ser Gln Lys Arg Val Phe Ser Trp Gly Phe Gly Gly Tyr Gly 150 155 Arg Leu Gly Thr Gln Ser Arg Arg Met Arg Trp Ser Pro Ala Trp 170 <210> 1213 <211> 127 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (41) <223> Xaa equals any of the naturally occurring L-amino acids <400> 1213 Cys Phe Ile Cys Val Trp Cys Lys Arg Lys Leu Asp Gln Ile Asn Leu 1.0 Gln Leu Met Ser Pro Asn Ala Asn Thr Gly Thr His Met His Thr Pro 20 Ile Asn Thr His Thr Val His Leu Xaa Lys Gly Gln Val Ile Ser His Pro Asn Phe Thr Ser Thr Asp Pro Leu Ala Pro Thr Pro Ala Ser Thr Val Thr Ser Lys Ala Arg Ala Thr Cys Ala His Gln Thr Cys Ile Lys Gln Leu Ala Gly Asp Gly Cys Gly Ala Gly Gly Leu Ser Asp Gly Ser

85 90 95

Leu Leu Leu Pro Leu Leu Arg Val Lys Leu Leu Ser Phe Leu Arg Val

Tyr Leu Cys Gln Val Cys Ala Phe Asn Cys Phe Tyr Phe Val Phe 115 120 125

<210> 1214

<211> 146

<212> PRT

<213> Homo sapiens

<400> 1214

Cys Thr Trp Asn Arg Cys Ser Ala Ser Pro Ala Gly Trp Gln Asn Ser 1 5 10 15

Phe Leu Gly His Leu Asn Pro Ser Ser Leu Leu Gln Asn Pro Pro Ala 20 25 30

Asn Arg Ile Gly Met Gly Ala Thr Leu Asp Ile Gln Arg Gln Gln Arg 35 40 45

Met Glu Leu Leu Asp Arg Gln Leu Met Phe Ser Gln Phe Ala Gln Gly 50 55 60

Arg Arg Gln Arg Gln Gln Gln Gly Gly Met Ile Asn Trp Asn Arg Leu 65 . 70 75 80

Phe Pro Pro Leu Arg Gln Arg Gln Asn Val Asn Tyr Gln Gly Gly Arg 85 90 95

Gln Ser Glu Pro Ala Ala Pro Pro Leu Glu Val Ser Glu Glu Gln Val 100 105 110

Ala Arg Leu Met Glu Met Gly Phe Ser Arg Gly Asp Ala Leu Glu Ala 115 120 125

Leu Arg Ala Ser Asn Asn Asp Leu Asn Val Ala Thr Asn Phe Leu Leu 130 135 140

Gln His 145

<210> 1215 <211> 116

<212> PRT

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<213> Homo sapiens
<220>
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<222> (107)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
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<222> (108)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 1215
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Asn Glu Cys Arg Lys Ala Phe Ser Tyr Cys Ser Gly Leu Ile Gln Cys
Gln Val Ile His Thr Ile Glu Lys Pro Tyr Glu Tyr Gly Lys Cys Gly
Lys Ala Phe Arg Gln Arg Thr Asp Leu Lys Lys His Gln Lys Met His
                        55
Thr Glu Glu Lys Pro Tyr Glu Cys Asn Glu Cys Gly Lys Ala Phe Ser
Gln Ser Thr Tyr Leu Thr Lys His Gln Lys Ile His Ser Glu Glu Lys
                 85
Ser Asn Ile His Thr Glu Cys Gly Glu Thr Xaa Xaa Gln Asn Ser Ser
Phe Leu Gln Gln
       115
<210> 1216
<211> 201
<212> PRT
<213> Homo sapiens
Ala Ala Gly Gly Glu Gly Phe Gly Ser Leu His Ala Ser Leu Val Gly
Phe Arg Gly Val Val Ala Gly Cys Ala Arg His Phe Arg Ala Ser Arg
             20
                                 25
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Asn Gly Val Ala Asn Gly Leu Gln Ser Asn Met Pro Lys Phe Tyr Cys 35 40 45 Asp Tyr Cys Asp Thr Tyr Leu Thr His Asp Ser Pro Ser Val Arg Lys Thr His Cys Ser Gly Arg Lys His Lys Glu Asn Val Lys Asp Tyr Tyr 70 Gln Lys Trp Met Glu Glu Gln Ala Gln Ser Leu Ile Asp Lys Thr Thr Ala Ala Phe Gln Gln Gly Lys Ile Pro Pro Thr Pro Phe Ser Ala Pro 105 Pro Pro Ala Gly Ala Met Ile Pro Pro Pro Pro Ser Leu Pro Gly Pro 115 120 Pro Arg Pro Gly Met Met Pro Ala Pro His Met Gly Gly Pro Pro Met 135 Met Pro Met Met Gly Pro Pro Pro Pro Gly Met Met Pro Val Gly Pro 150 155 Ala Pro Gly Met Arg Pro Pro Met Gly Gly His Met Pro Met Met Pro 165 Gly Pro Pro Met Met Arg Pro Pro Ala Arg Pro Met Met Val Pro Thr 185 Arg Pro Gly Met Thr Arg Pro Asp Arg

<210> 1217 <211> 473 <212> PRT <213> Homo sapiens

195

<400> 1217

Lys Phe Thr Met Lys Phe Leu Leu Ile Leu Leu Gln Ala Thr Ala

Ser Gly Ala Leu Pro Leu Asn Ser Ser Thr Ser Leu Glu Lys Asn Asn 20 25 30

Val Leu Phe Gly Glu Arg Tyr Leu Glu Lys Phe Tyr Gly Leu Glu Ile  $35 \hspace{1cm} 40 \hspace{1cm} 45$ 

Asn Lys Leu Pro Val Thr Lys Met Lys Tyr Ser Gly Asn Leu Met Lys

	50					55					60				
Glu 65	Lys	Ile	Gln	Glu	Met 70	Gln	His	Phe	Leu	Gly 75	Leu	Lys	Val	Thr	Gly 80
Gln	Leu	Asp	Thr	Ser 85	Thr	Leu	Glu	Met	Met 90	His	Ala	Pro	Arg	Cys 95	Gly
Val	Pro	Asp	Val 100	His	His	Phe	Arg	Glu 105	Met	Pro	Gly	Gly	Pro 110	Val	Trp
Arg	Lys	His 115	Tyr	Ile	Thr	Tyr	Arg 120	Ile	Asn	Asn	Tyr	Thr 125	Pro	Asp	Met
Asn	Arg 130	Glu	Asp	Val	Asp	Tyr 135	Ala	Ile	Arg	Lys	Ala 140	Phe	Gln	Val	Trp
Ser 145	Asn	Val	Thr	Pro	Leu 150	Lys	Phe	Ser	Lys	Ile 155	Asn	Thr	Gly	Met	Ala 160
Asp	Ile	Leu	Val	Val 165	Phe	Ala	Arg	Gly	Ala 170	His	Gly	Asp	Phe	His 175	Ala
			Lys 180					185					190		
Gly	Ile	Gly 195	Gly	Asp	Ala	His	Phe 200	Asp	Glu	Asp	Glu	Phe 205	Trp	Thr	Thr
	210	_	Gly			215					220				
His 225	Ser	Leu	Gly	Leu	Gly 230	His	Ser	Ser	Asp	Pro 235	Lys	Ala •	Val	Met	Phe 240
		-	Lys	245					250					255	
			Gly 260					265					270		
		275	Asn				280					285			
Leu	ser 290	Phe	Asp	Ala	Val	Thr 295	Thr	Val	Gly	Asn	Lys 300	Ile	Phe	Phe	Phe
305			Phe		310					315					320
Val	Asn	Leu	Ile	Ser	Ser	Leu	Trp	Pro	Thr	Leu	Pro	Ser	Gly	Ile	Glu

325 330 335 Ala Ala Tyr Glu Ile Glu Ala Arg Asn Gln Val Phe Leu Phe Lys Asp 340 345 Asp Lys Tyr Trp Leu Ile Ser Asn Leu Arg Pro Glu Pro Asn Tyr Pro 360 Lys Ser Ile His Ser Phe Gly Phe Pro Asn Phe Val Lys Lys Ile Asp 375 Ala Ala Val Phe Asn Pro Arg Phe Tyr Arg Thr Tyr Phe Phe Val Asp 385 390 Asn Gln Tyr Trp Arg Tyr Asp Glu Arg Arg Gln Met Met Asp Pro Gly 410 Tyr Pro Lys Leu Ile Thr Lys Asn Phe Gln Gly Ile Gly Pro Lys Ile 420 425 Asp Ala Val Phe Tyr Ser Lys Asn Lys Tyr Tyr Tyr Phe Phe Gln Gly 440 Ser Asn Gln Phe Glu Tyr Asp Phe Leu Leu Gln Arg Ile Thr Lys Thr 455 Leu Lys Ser Asn Ser Trp Phe Gly Cys 470 <210> 1218 <211> 598 <212> PRT <213> Homo sapiens <220> <221> SITE <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (144) <223> Xaa equals any of the naturally occurring L-amino acids <400> 1218 Ala Thr Ser Arg Gln Pro Ser Tyr Xaa Arg Thr Trp Cys Arg Arg Cys 5 10 15

-Cys Leu Pro Leu Ala Leu Asn Pro Val Pro Ala Ala Met Ala Pro Gly

			20					25					30		
Gln	Leu	Ala 35	Leu	Phe	Ser	Val	Ser 40	Asp	Lys	Thr	Gly	Leu 45	Val	Glu	Phe
Ala	Arg 50	Asn	Leu	Thr	Ala	Leu 55	Gly	Leu	Asn	Leu	Val 60	Ala	Ser	Gly	Gly
Thr 65	Ala	Lys	Ala	Leu	Arg 70	Asp	Ala	Gly	Leu	Ala 75	Val	Arg	Asp	Val	Ser 80
Glu	Leu	Thr	Gly	Phe 85	Pro	Glu	Met	Leu	Gly 90	Gly	Arg	Val	Lys	Thr 95	Leu
His	Pro	Ala	Val 100	His	Ala	Gly	Ile	Leu 105	Ala	Arg	Asn	Ile	Pro 110	Glu	Asp
Asn	Ala	Asp 115	Met	Ala	Arg	Leu	Asp 120	Phe	Asn	Leu	Ile	Arg 125	Val	Val	Ala
Cys	Asn 130	Leu	Tyr	Pro	Phe	Val 135	Lys	Thr	Val	Ala	Ser 140	Pro	Gly	Val	Xaa
Val 145	Glu	Glu	Ala	Val	Glu 150	Gln	Ile	Asp	Ile	Gly 155	Gly	Val	Thr	Leu	Leu 160
Arg	Ala	Ala	Ala	Lys 165	Asn	His	Ala	Arg	Val 170	Thr	Val	Val	Cys	Glu 175	Pro
Glu	Asp	Tyr	Val 180	Val	Val	Ser	Thr	Glu 185	Met	Gln	Ser	Ser	Glu 190	Ser	Lys
Asp	Thr	Ser 195	Leu	Glu	Thr	Arg	Arg 200	Gln	Leu	Ala	Leu	Lys 205	Ala	Phe	Thr
His	Thr 210	Ala	Gln	туг	Asp	Glu 215	Ala	Ile	Ser	Asp	туг 220	Phe	Arg	Lys	Gln
Туг 225	Ser	Lys	Gly	Val	Ser 230	Gln	Met	Pro	Leu	Arg 235	туr	Gly	Met	Asn	Pro 240
His	Gln	Thr	Pro	Ala 245	Gln	Leu	Tyr	Thr	Leu 250	Gln	Pro	Lys	Leu	Pro 255	Ile
Thr	Val	Leu	Asn 260	Gly	Ala	Pro	Gly	Phe 265	Ile	Asn	Leu	Суѕ	Asp 270	Ala	Leu
Asn	Ala	Trp 275	Gln	Leu	Val	Lys	Glu 280	Leu	Lys	Glu	Ala	Leu 285	Gly	Ile	Pro
Ala	Ala	Ala	Ser	Phe	Lys	His	Val	Ser	Pro	Ala	Gly	Ala	Ala	Val	Gly

	290	)				295	•				300	)			
11e 305	Pro	Leu	Ser	Glu	Asp 310		Ala	Lys	val	1 Cys 315		t Val	L Туг	Asp	32
Туг	Lys	Thr	Leu	Thr 325		Ile	Ser	Ala	330		Ala	a Arç	g Ala	335	
Ala	Asp	Arg	Met 340		Ser	Phe	Gly	Asp 345		e Val	. Ala	Leu	350		Va:
Cys	Asp	Val 355		Thr	Ala	Lys	11e 360		Ser	Arg	Glu	365	. Ser	Asp	Gly
Ile	11e 370		Pro	Gly	Tyr	Glu 375		Glu	Ala	. Leu	Thr 380		. Leu	Ser	Lys
Lys 385	Lys	Asn	Gly	Asn	Туг 390	Cys	Val	Leu	Gln	395		Gln	Ser	Tyr	Lys 400
Pro	Asp	Glu	Asn	Glu 405	Val	Arg	Thr	Leu	Phe 410		Leu	His	Leu	Ser 415	
Lys	Arg	Asn	Asn 420	Gly	Val	Val	Asp	Lys 425		Leu	Phe	Ser	Asn 430	Val	Val
Thr	Lys	Asn 435	Lys	Asp	Leu	Pro	Glu 440	Ser	Ala	Leu	Arg	Asp 445	Leu	Ile	Val
	450					455					460		Cys		
465					470					475			Ser		480
				485					490				Trp	495	
			500					505					Val 510		
		515		-		,	52 <b>0</b>					525	Thr		
	530					535					540		Glu		
545					550					555			Lys		560
- 111	va I	Ser	TIE	ser	Ser	ASD	Ala	Phe	Dha	Pro	Dho	Ara	Acn	Acn	77 - 1

1245

570

575

565

Asp Arg Ala Lys Arg Ser Gly Val Ala Tyr Ile Ala Ala Pro Pro Val 585 Leu Leu Leu Thr Lys Leu 595 <210> 1219 <211> 209 <212> PRT <213> Homo sapiens <400> 1219 Tyr Thr Ala Ile Met Ser Ile Met Ser Tyr Asn Gly Gly Ala Val Met Ala Met Lys Gly Lys Asn Cys Val Ala Ile Ala Ala Asp Arg Arg Phe Gly Ile Gln Ala Gln Met Val Thr Thr Asp Phe Gln Lys Ile Phe Pro 40 Met Gly Asp Arg Leu Tyr Ile Gly Leu Ala Gly Leu Ala Thr Asp Val Gln Thr Val Ala Gln Arg Leu Lys Phe Arg Leu Asn Leu Tyr Glu Leu 70 75 Lys Glu Gly Arg Gln Ile Lys Pro Tyr Thr Leu Met Ser Met Val Ala Asn Leu Leu Tyr Glu Lys Arg Phe Gly Pro Tyr Tyr Thr Glu Pro Val 100 105 Ile Ala Gly Leu Asp Pro Lys Thr Phe Lys Pro Phe Ile Cys Ser Leu 120 Asp Leu Ile Gly Cys Pro Met Val Thr Asp Asp Phe Val Val Ser Gly 135 Thr Cys Ala Glu Gln Met Tyr Gly Met Cys Glu Ser Leu Trp Glu Pro Asn Met Asp Pro Asp His Leu Phe Glu Thr Ile Ser Gln Ala Met Leu 170 Asn Ala Val Asp Arg Asp Ala Val Ser Gly Met Gly Val Ile Val His 180 185

Ile Ile Glu Lys Asp Lys Ile Thr Thr Arg Thr Leu Lys Ala Arg Met
195 200 205

Asp

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<210> 1220
<211> 140
<212> PRT
<213> Homo sapiens
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<222> (51)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
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Ile Ile Ser Ile Ile Ser Thr Ser Asn Lys Ile Lys Met Ser Glu Ala
                                     10
                                                         15
Pro Arg Phe Phe Val Gly Pro Glu Asp Thr Glu Ile Asn Pro Gly Asn
Tyr Arg His Phe Phe His His Ala Asp Glu Asp Asp Glu Glu Glu Asp
                            40
Asp Ser Xaa Pro Glu Arg Gln Ile Val Val Gly Ile Cys Ser Met Xaa
                         55
Lys Lys Ser Lys Ser Lys Pro Met Lys Glu Ile Leu Xaa Arg Ile Ser
Leu Phe Lys Tyr Ile Thr Val Val Phe Glu Glu Glu Val Ile Leu
Asn Glu Pro Val Glu Asn Trp Pro Leu Cys Asp Cys Leu Ile Ser Phe
            100
                              105
```

1247

His Ser Lys Gly Phe Pro Leu Asp Lys Ala Val Ala Tyr Ala Lys Leu 115 120 125

Arg Asn Pro Phe Val Ile Asn Asp Leu Asn Met Gln 130 135 140

<210> 1221

<211> 45

<212> PRT

<213> Homo sapiens

<400> 1221

Gly Leu Met Glu Ile Glu Ile Thr Cys Lys Asp Ile Thr Val Phe Met
1 5 10 15

Ser Tyr Ile Leu Val Leu Glu Ile Val Glu Cys Met Ile Asp Asn Ile 20 25 30

Phe Leu Ile Phe Ile Phe Ser Ser Asn Thr Ser Thr Val 35 40 45

<210> 1222

<211> 70

<212> PRT

<213> Homo sapiens

<400> 1222

Val Ala Tyr Ile Cys Tyr Ser Lys Phe Cys Lys Tyr Ala Asn Gln Leu 1 5 10 15

Tyr Arg Phe Ile Thr Ser Phe Leu Gly Phe Phe Trp Gly Arg Val Ile  $20 \hspace{1cm} 25 \hspace{1cm} 30$ 

Ile Leu Leu Lys Ile Thr Met Asn Thr Leu Thr Val Arg Ile Cys Gly 35 40 45

Lys Val Pro Leu Asn Ile Thr Lys Ile Ile Ser Leu Glu Gly Arg Asn 50 60

Asn His Ser Asn Glu Leu

<210> 1223

<211> 88

<212> PRT

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<213> Homo sapiens
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<400> 1223

Phe Tyr Pro Ser Thr Tyr Leu Lys Ala Pro Ser Ser Leu Val Cys Gly

1 5 10 15

Val Leu Glu Pro Val Ser Ser Phe Trp Arg Phe Lys Leu Asn Ser Asn
20 25 30

Asn Tyr Val Thr Gln Ser Met Trp Arg Lys Ser Glu Thr Ser His Gly  $35 \ 40 \ 45$ 

Asp Ala Gly Pro Arg Ala Arg Pro Ala Val Trp Pro Ala Leu Leu Thr 50 55 60

Asp Glu Gly Arg Glu Gly Thr Gly 85

<210> 1224

<211> 298

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (279)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 1224

Ala Thr Arg Arg Arg Ala Ala Glu Ala Gly Met Ala Ala Val Leu Gln  $1 \hspace{1.5cm} 5 \hspace{1.5cm} 10 \hspace{1.5cm} 15$ 

Arg Val Glu Arg Leu Ser Asn Arg Val Val Arg Val Leu Gly Cys Asn 20 25 30

Pro Gly Pro Met Thr Leu Gln Gly Thr Asn Thr Tyr Leu Val Gly Thr 35 40 45

Gly Pro Arg Arg Ile Leu Ile Asp Thr Gly Glu Pro Ala Ile Pro Glu 50 55 60

Tyr Ile Ser Cys Leu Lys Gln Ala Leu Thr Glu Phe Asn Thr Ala Ile 65 70 75 80

Gln Glu Ile Val Val Thr His Trp His Arg Asp His Ser Gly Gly Ile 85 90 95

Gly	Asp	Ile	Cys 100	Lys	Ser	lle	Asn	Asn 105	Asp	Thr	Thr	Tyr	Cys 110	Ile	Lys
Lys	Leu	Pro 115	Arg	Asn	Pro	Gln	Arg 120	Glu	Glu	Ile	Ile	Gly 125	Asn	Gly	Glu
Gln	Gln 130	Tyr	Val	Tyr	Leu	Lys 135	Asp	Gly	Asp	Val	11e 140	Lys	Thr	Glu	Gly
Ala 145	Thr	Leu	Arg	Val	Leu 150	Tyr	Thr	Pro	Gly	His 155	Thr	Asp	Asp	His	Met 160
Ala	Leu	Leu	Leu	Glu 165	Glu	Glu	Asn	Ala	Ile 170	Phe	Ser	Gly	Asp	Cys 175	Ile
Leu	Gly	Glu	Gly 180	Thr	Thr	Val	Phe	Glu 185	Asp	Leu	Tyr	Asp	Туг 190	Met	Asn
Ser	Leu	Lys 195	Glu	Leu	Leu	Lys	Ile 200	Lys	Ala	Asp	Ile	11e 205	Tyr	Pro	Gly
His	Gly 210	Pro	Val	Ile	His	Asn 215	Ala	Glu	Ala	Lys	11e 220	Gln	Gln	Tyr	Ile
Ser 225	His	Arg	Asn	Ile	Arg 230	Glu	Gln	Gln	Ile	Leu 235	Thr	Leu	Phe	Arg	Glu 240
Asn	Phe	Glu	Lys	Ser 245	Phe	Thr	Val	Met	Glu 250	Leu	Val	Lys	Ile	Ile 255	Tyr
Lys	Asn	Thr	Pro 260	Glu	Asn	Leu	His	Glu 265	Met	Ala	Lys	His	Asn 270	Leu	Leu
		275					280			Lys	Ile	Phe 285	Ser	Asn	Thr
Asp	Pro 290	Asp	Lys	Lys	Trp	Lys 295	Ala	His	Leu						

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<213> Homo sapiens
<400> 1225
Val Ser Gly Asp Tyr Gly His Pro Val Tyr Ile Val Gln Asp Gly Pro
1 5 10 15
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<210> 1225 <211> 27 <212> PRT Pro Gln Ser Pro Pro Asn Ile Tyr Tyr Lys Val 20 25

<210> 1226

<211> 380

<212> PRT

<213> Homo sapiens

<400> 1226

Glu Gln Glu Leu Asp Thr Leu Lys Arg Lys Ser Pro Ser Asp Leu Trp

1 5 10 15

Lys Glu Asp Leu Ala Thr Phe Ile Glu Glu Leu Glu Ala Val Glu Ala 20 25 30

Lys Glu Lys Gln Asp Glu Gln Val Gly Leu Pro Gly Lys Val Gly Lys  $35 \hspace{1cm} 40 \hspace{1cm} 45$ 

Ala Lys Gly Lys Lys Thr Gln Met Ala Glu Val Leu Pro Ser Pro Arg 50 55 60

Gly Gln Arg Val Ile Pro Arg Ile Thr Ile Glu Met Lys Ala Glu Ala 65 70 75 80

Glu Lys Lys Asn Lys Lys Lys Ile Lys Asn Glu Asn Thr Glu Gly Ser \$90\$

Pro Gln Glu Asp Gly Val Glu Leu Glu Gly Leu Lys Gln Arg Leu Glu
100 105 110

Lys Lys Gln Lys Arg Glu Pro Gly Thr Lys Thr Lys Lys Gln Thr Thr 115 120 125

Leu Ala Phe Lys Pro Ile Lys Lys Gly Lys Lys Arg Asn Pro Trp Ser 130 135 140

Asp Ser Glu Ser Asp Arg Ser Ser Asp Glu Ser Asn Phe Asp Val Pro 145 150 155 160

Pro Arg Glu Thr Glu Pro Arg Arg Ala Ala Thr Lys Thr Lys Phe Thr 165 170 175

Met Asp Leu Asp Ser Asp Glu Asp Phe Ser Asp Phe Asp Glu Lys Thr
180 185 190

Asp Asp Glu Asp Phe Val Pro Ser Asp Ala Ser Pro Pro Lys Thr Lys 195 200 205

Thr Ser Pro Lys Leu Ser Asn Lys Glu Leu Lys Pro Gln Lys Ser Val

1251

210 215 Val Ser Asp Leu Glu Ala Asp Asp Val Lys Gly Ser Val Pro Leu Ser 230 235 Ser Ser Pro Pro Ala Thr His Phe Pro Asp Glu Thr Glu Ile Thr Asn Pro Val Pro Lys Lys Asn Val Thr Val Lys Lys Thr Ala Ala Lys Ser 265 Gln Ser Ser Thr Ser Thr Thr Gly Ala Lys Lys Arg Ala Ala Pro Lys 285 Gly Thr Lys Arg Asp Pro Ala Leu Asn Ser Gly Val Ser Gln Lys Pro 295 Asp Pro Ala Lys Thr Lys Asn Arg Arg Lys Arg Lys Pro Ser Thr Ser 305 310 Asp Asp Ser Asp Ser Asn Phe Glu Lys Ile Val Ser Lys Ala Val Thr Ser Lys Lys Ser Lys Gly Glu Ser Asp Asp Phe His Met Asp Phe Asp 345 Ser Ala Val Ala Pro Arg Ala Lys Ser Val Arg Ala Lys Lys Pro Ile 355 360 Lys Tyr Leu Glu Glu Ser Asp Glu Asp Asp Leu Phe 370 375 <210> 1227 <211> 78 <212> PRT <213> Homo sapiens <220> <221> SITE

<223> Xaa equals any of the naturally occurring L-amino acids

Glu Phe Arg Gly Lys Lys Leu Ser Ala Xaa Met Leu Arg Ala His Leu 20 25 30

<222> (26)

Ser Pro His Thr Pro Thr Glu Leu Thr Gly Leu Gli Cys Phe Ile Arg 35 40 45

Lys Phe Pro Ile Pro Leu Ser Cys Val Phe Met Leu Lys Ile Leu Leu 50 55 60

His Phe Ser Phe Glu Cys Gln Phe Leu Thr Ser Thr Ile Ser 65 70 75

<210> 1228

<211> 222

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (142)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 1228

Ala Asn Glu Lys Val Ala Leu Gln Lys Ala Leu Leu Tyr Tyr Glu Ser 1  $\phantom{\bigg|}$  5  $\phantom{\bigg|}$  10  $\phantom{\bigg|}$  15

Ile His Gly Arg Pro Val Thr Lys Asn Glu Arg Gln Val Met Lys Pro

Leu Tyr Asp Arg Tyr Arg Leu Val Lys Gln Ile Leu Ser Arg Ala Asn 35 40 45

Thr Ile Pro Ile Ile Gly Ser Pro Ser Ser Lys Arg Arg Ser Pro Leu
50 55 60

Leu Gln Pro Ile Ile Glu Gly Glu Thr Ala Ser Phe Phe Lys Glu Ile 65 70 75 80

Lys Glu Glu Glu Gly Ser Glu Asp Asp Ser Asn Val Lys Pro Asp 85 90 95

Phe Met Val Thr Leu Lys Thr Asp Phe Ser Ala Arg Cys Phe Leu Asp  $100 \hspace{1cm} 105 \hspace{1cm} 110$ 

Gln Phe Glu Asp Asp Ala Asp Gly Phe Ile Ser Pro Met Asp Asp Lys
115 120 125

Ile Pro Ser Lys Cys Ser Gln Asp Thr Gly Leu Ser Asn Xaa His Ala 130 135 140

Ala Ser Ile Pro Glu Leu Leu Glu His Leu Gln Glu Met Arg Glu Glu 145 150 150 160

Lys	Lys	Arg	Ile	Arg 165	Lys	Lys	Leu	Arg	170		Glu	Asp	Asn	Phe 175	Phe
Arg	Gln	Asn	Gly 180	Arg	Asn	Val	Gln	Lys 185		Asp	Arg	Thr	Pro 190	Met	Ala
Glu	Glu	Туг 195	Ser	Glu	Tyr	Lys	His 200	Ile	Lys	Ala	Lys	Leu 205	Arg	Leu	Leu
Glu	Val 210	Leu	Ile	Ser	Lys	Arg 215	Asp	Thr	Asp	Ser	Lys 220	Ser	Met		
<21	0> 12	229													
	1> 22														
	2> PI														
<21.	3> но	omo s	sapie	ens											
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Lys	Gly	Ser	Thr	Leu	Gly	His	Leu	Cys	Thr	Ala	Met	Ala	Gly	Met	Met
1				5				-	10				-	15	
_															
Lys	GIA	Ile		Trp	Ser	Cys	Pro		Ile	Ala	Ser	Ile		Gln	Thr
			20					25					30		
Arg	Ser	Ser	Gln	Glu	Lys	Asp	Ser	Ser	Ser	Pro	Pro	Trp	Asp	Leu	Ara
		35			_	-	40					45	•		
Arg		Ala	Thr	Glu	Gly		Ala	Pro	Asp	Ala		Cys	Gln	Ser	Gln
	50					55					60				
Val	Arg	Gly	Gln	Ser	Ser	Pro	Cys	His	Pro	Trp	Cys	Arg	Pro	Ala	Pro

 Ser
 Glu Leu Asp
 Pro
 Gly
 Asp
 Leu Gly
 Ser
 Phe 140
 Leu Ala His Gln 140

 Pro
 Cys
 Arg
 Pro
 His
 Leu Ser
 Gln Asn Pro
 Leu Cys
 Leu Gly
 Gly
 Ser 160

Ser Ser Phe Met Pro Gly Pro Ala Gly Thr Pro Ala Thr Thr Glu Ser

Thr Arg Ser Ala Leu Cys Ser Trp Arg Arg His Ser Arg Val Glu Ser

Cys Pro Ser Leu Ser Leu Gly His Leu Gly Gly Glu Ser Gly Leu Arg

120

90

```
Gly Ser Ala Leu Leu Cys Ser Arg Arg Leu Gly Ser Gly Gln His Gln
Val Gly Lys Trp Ser Pro Pro Ser Cys Phe Cys Arg Ile Leu Thr Val
            180
                                185
Gly Leu Glu Glu Lys Ser Ile Asp Leu Ile Ser Pro Thr Thr His Pro
                           200
Ser Phe Ser Phe Phe His His Ser Pro Pro Gln Leu
    210
                        215
<210> 1230
<211> 183
<212> PRT
<213> Homo sapiens
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<222> (11)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
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<223> Xaa equals any of the naturally occurring L-amino acids
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<222> (30)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 1230
Glu Leu Lys Arg Leu Thr Ile Gly Lys Asn Xaa Xaa Arg Leu Thr Gly
Asn Arg Xaa Gly Ile Pro Gly Ser Thr His Ala Ser Glu Xaa Glu Val
             20
Glu Glu Glu Gly Asp Val Asp Ser Asp Glu Glu Glu Glu Asp Glu
                             40
Glu Ser Ser Glu Gly Leu Glu Ala Glu Asp Trp Ala Gln Gly Val
                         55
```

```
Val Glu Ala Gly Gly Ser Phe Gly Ala Tyr Gly Ala Gln Glu Glu Ala
                  7.0
                                    75
Gln Cys Pro Thr Leu His Phe Leu Glu Gly Gly Glu Asp Ser Asp Ser
Asp Ser Glu Glu Glu Asp Asp Glu Glu Glu Asp Asp Glu Asp
          100 105
Asp Asp Asp Glu Glu Asp Gly Asp Glu Val Pro Val Pro Ser Phe
                         120
Gly Glu Ala Met Ala Tyr Phe Ala Met Val Lys Arg Tyr Leu Thr Ser
   130
                     135 140
Phe Pro Ile Asp Asp Arg Val Gln Ser His Ile Leu His Leu Glu His
Asp Leu Val His Val Thr Arg Lys Asn His Ala Arg Gln Ala Gly Val
             165 170
Arg Gly Leu Gly His Gln Ser
          180
<210> 1231
<211> 59
<212> PRT
<213> Homo sapiens
<400> 1231
Asn Leu Tyr Lys Leu Lys Leu Asn His Glu Leu Gln Lys Lys Ser Ile
Leu Pro Lys Leu Asp Val Thr Thr Leu Thr Ser Leu Lys Tyr Glu Val
           20
                             25
Asp Cys Leu Lys Asp Ser Ala Tyr Ile Leu Val Cys Thr Phe Arg Asn
                          40
Ile Phe Leu Gly Lys Ser Thr Gln His Phe Leu
               55
<210> 1232
<211> 135
<212> PRT
<213> Homo sapiens
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< 40	0> 1	232													
Gly 1	Ser	Thr	His	Ala 5		Gly	Pro	Pro	Gln 10		a Pro	Glr	ı Lei	1 Ile 15	
Gln	Glu	туг	Val 20	. Asn	Gln	Pro	Asp	Val 25		Pro	Glr	Pro	Pro 30		Pro
Arg	Glu	Gly 35		Leu	Pro	Ala	Ala 40		Pro	Ala	Gly			Leu	Glu
Arg	Ala 50	Lys	Thr	Leu	Ser	Pro 55		Lys	Asn	Gly	Val		. Lys	Asp	Val
Phe 65	Ala	Phe	Gly	Gly	Ala 70		Glu	Asn	Pro	Glu 75		Leu	Thr	Pro	Gln 80
Gly	Gly	Ala	Ala	Pro 85	Gln	Pro	His	Pro	Pro 90		Ala	Phe	Ser	Pro 95	
Phe	Asp	Asn	Leu 100	Tyr	Tyr	Trp	Asp	Gln 105	Asp	Pro	Pro	Glu	Arg		Ala
Pro	Pro	Ser 115	Thr	Phe	Lys	Gly	Thr 120	Pro	Thr	Ala	Glu	Asn 125		Glu	Tyr
Leu	Gly 13 <b>0</b>	Leu	Asp	Val	Pro	Val 135									
															•
<211	)> 1; .> 1; !> PI	34							•						
		omo s	sapie	ens											
<400	> 12	22													
			Thr	Arg 5	Glu	Met	Ala	Gly	Asn 10	Leu	Leu	Ser	Gly	Ala 15	Gly
Arg	Arg	Leu	Trp 20	Asp	Trp	Val	Pro	Leu 25	Ala	Cys	Arg	Ser	Phe 30	Ser	Leu
Gly	Val	Pro 35	Arg	Leu	Ile	Gly	Ile 40	Arg	Leu	Thr	Leu	Pro 45	Pro	Pro	Lys
/al	Val 50	Asp	Arg	Trp	Asn	Glu 55	Lys	Arg	Ala	Met	Phe 60	Gly	Val	Tyr	Asp
Asn 65	Ile	Gly	Ile	Leu	Gly 70	Asn	Phe	Glu	Lys	His 75	Pro	Lys	Glu	Leu	Ile 80

1257

Arg Gly Pro Ile Trp Leu Arg Gly Trp Lys Gly Asn Glu Leu Gln Arg

```
85
                                      90
Cys Ile Arg Lys Arg Lys Met Val Gly Ser Arg Met Phe Ala Asp Asp
                                105
Leu His Asn Leu Asn Lys Arg Ile Arg Tyr Leu Tyr Lys His Phe Asn
                            120
Arg His Gly Lys Phe Arg
    130
<210> 1234
<211> 282
<212> PRT
<213> Homo sapiens
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<222> (8)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (18)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 1234
Thr Gly Pro Glu Phe Pro Gly Xaa Pro Thr Arg Pro Arg Thr Ala Ala
Ala Xaa Ser Ala Arg Thr Arg Thr Arg Gly Ser Pro Arg Met Gly Glu
             20
Phe Asn Glu Lys Lys Thr Thr Cys Gly Thr Val Cys Leu Lys Tyr Leu
Leu Phe Thr Tyr Asn Cys Cys Phe Trp Leu Ala Gly Leu Ala Val Met
     50
                         55
Ala Val Gly Ile Trp Thr Leu Ala Leu Lys Ser Asp Tyr Ile Ser Leu
65
Leu Ala Ser Gly Thr Tyr Leu Ala Thr Ala Tyr Ile Leu Val Val Ala
                                     90
Gly Thr Val Val Met Val Thr Gly Val Leu Gly Cys Cys Ala Thr Phe
            100
                               105
```

Lys Glu Arg Arg Asn Leu Leu Arg Leu Tyr Phe Ile Leu Leu Leu Ile 115 120 125

Ile Phe Leu Leu Glu Ile Ile Ala Gly Ile Leu Ala Tyr Ala Tyr Tyr 130 135 140

Gln Gln Leu Asn Thr Glu Leu Lys Glu Asn Leu Lys Asp Thr Met Thr 145 150 155 160

Lys Arg Tyr His Gln Pro Gly His Glu Ala Val Thr Ser Ala Val Asp 165 170 175

Gln Leu Gln Glu Phe His Cys Cys Gly Ser Asn Asn Ser Gln Asp 180 185 190

Trp Arg Asp Ser Glu Trp Ile Arg Ser Gln Glu Ala Gly Gly Arg Val 195 200 205

Val Pro Asp Ser Cys Cys Lys Thr Val Val Ala Leu Cys Gly Gln Arg 210 215 220

Asp His Ala Ser Asn Ile Tyr Lys Val Glu Gly Gly Cys Ile Thr Lys 225 230 235 240

Leu Glu Thr Phe Ile Gln Glu His Leu Arg Val Ile Gly Ala Val Gly 245 250 255

Ile Gly Ile Ala Cys Val Gln Val Phe Gly Met Ile Phe Thr Cys Cys  $\phantom{\bigg|}265\phantom{\bigg|}270\phantom{\bigg|}$ 

Leu Tyr Arg Ser Leu Lys Leu Glu His Tyr 275 280

<210> 1235

<211> 66

<212> PRT

<213> Homo sapiens

<400> 1235

Ala Glu Ile Gln Val Phe Gln Val Gly Leu Val Ser Trp Gly Leu Tyr

Asn Pro Cys Leu Gly Ser Ala Asp Lys Asn Ser Arg Lys Arg Ala Pro

Arg Ser Lys Val Pro Pro Pro Arg Asp Phe His Ile Asn Leu Phe Arg 35 40 45

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Met Gln Pro Trp Leu Arg Gln His Leu Gly Asp Val Leu Asn Phe Leu 50 60
```

Pro Leu 65

<210> 1236

<211> 108

<212> PRT

<213> Homo sapiens

<400> 1236

Ala Arg Arg Arg Gly Gly Trp Ala Gly Gly Gly Gly Gly Thr Arg

1 5 10 15

Arg Ala Leu Gly Val Pro Val Ala Arg Arg Arg Arg Met Trp Arg Ala 20 25 30

Glu Gly Lys Trp Leu Pro Lys Thr Ser Arg Lys Ser Val Ser Gln Ser 35 40 45

Val Phe Cys Gly Thr Ser Thr Tyr Cys Val Leu Asn Thr Val Pro Pro 50 55 60

Ile Glu Asp Asp His Gly Asn Ser Asn Ser Ser His Val Lys Ile Phe 65 70 75 80

Leu Pro Lys Lys Leu Leu Glu Cys Leu Pro Lys Cys Ser Ser Leu Pro 85 90 95

Lys Glu Arg His Arg Trp Asn Thr Asn Glu Arg Ser 100 105

<210> 1237

<211> 116

<212> PRT

<213> Homo sapiens

<400> 1237

Arg Gly Gly Ser Lys Gly Asn Glu Val Arg Pro Val Ala Gly Ser
1 5 10 15

Ala Glu Ser Ala Ala Leu Arg Leu Arg Ala Pro Leu Gln Gln Val Gln 20 25 30

Ala Gln Leu Ser Pro Leu Gln Asn Ile Ser Pro Trp Ile Leu Ala Val $35 \hspace{1.5cm} 40 \hspace{1.5cm} 45$ 

Leu Thr Leu Gln Ile Gln Ser Leu Ile Ser Cys Trp Ala Phe Trp Thr 50 55 60

Thr Trp Thr Gln Ser Cys Ser Ser Asn Ala Leu Pro Gln Ser Leu Pro 65 70 75 80

Ala Trp Arg Ser Ser Gln Arg Ser Thr Gln Lys Asp Pro Val Pro Tyr
85 90 95

Gln Pro Pro Phe Leu Cys Gln Trp Gly Arg His Gln Pro Ser Trp Lys 100 105 110

Pro Leu Met Asn 115

<210> 1238

<211> 311

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (16)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 1238

Val Thr Ser Glu Gly Val Arg Val Arg Ser Ser Arg Gly Arg Ala Xaa 1 5 10 15

Gly Val Trp Arg Phe Glu Arg Asp Glu Asp Gly Thr Gly Ala Gly Cys
20 25 30

Gly Gln Trp Thr Arg Phe Cys Arg Glu Pro Lys Met Ala Val Asn Val 35 40 45

Tyr Ser Thr Ser Val Thr Ser Asp Asn Leu Ser Arg His Asp Met Leu 50 55 60

Ala Trp Ile Asn Glu Ser Leu Gln Leu Asn Leu Thr Lys Ile Glu Gln 65 70 75 80

Leu Cys Ser Gly Ala Ala Tyr Cys Gln Phe Met Asp Met Leu Phe Pro

Gly Ser Ile Ala Leu Lys Lys Val Lys Phe Gln Ala Lys Leu Glu His 100 105 110

Glu Tyr Ile Gln Asn Phe Lys Ile Leu Gln Ala Gly Phe Lys Arg Met

1261

		115	•				120	ı				125			
Gly	Val	. Asp	Lys	Ile	: Ile	Pro 135		Asp	Lys	Leu	Val		Gly	Lys	Ph <b>e</b>
Gln 145	Asp	Asn	Phe	Glu	Phe 150		Gln	Trp	Phe	Lys 155		Phe	Phe	Asp	Ala 160
Asn	туг	Asp	Gly	Lys 165		Tyr	Asp	Pro	Val 170		Ala	Arg	Gln	Gly 175	Gln
Glu	Thr	Ala	Val 180	Ala	Pro	Ser	Leu	Val 185	Ala	Pro	Ala	Leu	Asn 190	Lys	Pro
Lys	Lys	Pro 195	Leu	Thr	Ser	Ser	Ser 200		Ala	Pro	Gln	Arg 205	Pro	Ile	Ser
Thr	Gln 210	Arg	Thr	Ala		Ala 215	Pro	Lys	Ala	Gly	Pro 220	Gly	Val	Val	Arg
Lys 225	Asn	Pro	Gly	Val	Gly 230	Asn	Gly	Asp	Asp	Glu 235	Ala	Ala	Glu	Leu	Met 240
Gln	Gln	Val	Asn	Val 245	Leu	Lys	Leu	Thr	Val 250	Glu	Asp	Leu	Glu	Lys 255	Glu
Arg	Asp	Phe	туг 260	Phe	Gly	Lys		Arg 265	Asn	Ile	Glu	Leu	Ile 27 <b>0</b>	Cys	Gln
Glu	Asn	Glu 275	Gly	Glu	Asn		Pro 280	Val	Leu	Gln	Arg	Ile 285	Val	Asp	Ile
Leu	Tyr 290	Ala	Thr	Asp	Glu	Gly 295	Phe	Val	Ile	Pro	<b>As</b> p 300	Glu	Gly	Gly	Pro
Gln 305	Glu	Glu	Gln	Glu	Glu 310	Tyr									
<210															
<211		-													
<212															
<213			apie	ns											
<400															
Ala i	Ala	Arg	Leu	Ala 5	Val	Glu i	Met :	Lys	Thr 10	Asp :	Leu	Leu	Ile	Val :	Leu

Ser Asp Val Glu Gly Leu Phe Asp Ser Pro Pro Gly Ser Asp Asp Ala

25

30

Lys	Leu	11e		) Ile	Phe	туг	Pro 40		/ Asp	Glr	Glr	1 Ser 45		Thr	Ph
Gly	Thr 50		Ser	Arg	, Val	. Gly 55	Met	Gly	gly	Met	Glu 60		Lys	Val	. Ly:
Ala 65		Leu	Trp	Ala	Leu 70		Gly	Gly	Thr	Ser 75		. Val	. Ile	Ala	As:
Gly	Thr	His	Pro	Lys 85		Ser	Gly	His	90		Thr	Asp	Ile	Val 95	
Gly	Lys	Lys	Val 100		Thr	Phe	Phe	Ser 105		Val	Lys	Pro	110		Pro
Thr	Val	Glu 115		Gln	Gly	Glu	Met 120		Arg	Ser	Gly	Gly 125		Met	Leu
	130					135					140				
145					150		Asp			155					160
				165			Arg		170					175	
			180				Leu	185					190		-
		195					Asp 200					205			
	210			_		215	Glu				220				
225					230		Glu			235		-			240
				245			Ser	_	250					255	_
			260				Asn	265					270		
		275					Val 280	-				285			
- 114	290	GIU	GIU	vdI	GIU	295	Leu	cys	wr.d	ren	300	гåа	met	TTE	Asp

```
Leu Ile Ile Pro Arg Gly Ser Ser Gln Leu Val Arg Asp Ile Gln Lys
                     310
 Ala Ala Lys Gly Ile Pro Val Met Gly His Ser Glu Gly Ile Cys Ala
                 325
                                     330
 His Val Cys Gly Phe Arg Gly Gln Cys
             340
 <210> 1240
 <211> 87
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 <213> Homo sapiens
 <400> 1240
 Gly Tyr Cys Phe Ile Ser Thr Ser Arg Thr Pro Lys Glu Thr Ile Trp
                         10
                                                         . . .2.
Val Lys Ala Thr Ser Thr Ala Leu Ala Leu His Arg Phe Leu Glu Phe
                                 25
Leu Ser Phe Thr Phe Ser Leu Thr Gln His Cys Leu Leu Phe Val Phe
                             40
Val Ala Trp Phe Val Phe Phe Leu Pro Cys Ser Pro Asn Leu Cys Pro
     50
Asn Ser Phe Gly Leu Met Gln Lys Tyr Leu Cys Gly Arg Glu Glu Leu
Phe Ser Trp Arg Ala Phe Arg
                85
<210> 1241
<211> 196
<212> PRT
<213> Homo sapiens
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Arg Ala Gly Ser Pro Ala Ser Pro Ala His Val Ala Trp Pro Pro Ala
                 5
                                                        1.5
Pro Thr Trp Ser Arg Ala Leu Pro Arg Val Ala Pro Arg Ser Ser Ser
                                 25
Arg Arg Gly Arg Arg Tyr Pro Glu Arg Ser Gln Arg Arg Arg Glu Val
```

		35					40					45			
Ala	Ala	Thr	Ala	Met	Pro	Lys	Asn	Lvs	Glv	Lvs	Glv	Gly	Lvs	Asn	Ara
	50					55		•	•		60				
Arg 65	Arg	Gly	Lys	Asn	Glu 70	Asn	Glu	Ser	Glu	Lys 75	Arg	Glu	Leu	Val	Phe 80
Lys	Glu	Asp	Gly	Gln 85	Glu	Tyr	Ala	Gln	Val 90	Ile	Lys	Met	Leu	Gly 95	Asn
Gly	Arg	Leu	Glu 100	Ala	Met	Cys	Phe	Asp 105	Gly	Val	Lys	, Arg	Leu 110	Cys	His
Ile	Arg	Gly 115	Lys	Leu	Ar.g	Lys	Ly.s 120	Val	Trp	Ile	Asn	Thr 125	Ser	Asp	Ile
Ile	Leu 130	Val	Gly	Leu	Arg	Asp 135	Tyr	Gln	Asp	Asn	Lys 140	Ala	Asp	Val	Ile
	Lys	туг	Asn	Ala	Asp	Glu	Ala	Arg	Ser	Leu	Lys	Ala	Tyr	Gly	Glu
145					150					155					160
Leu	Pro	Glu	His	Ala 165	Lys	Ile	Asn	Glu	Thr 170	Asp	Thr	Phe	Gly	Pro 175	Gly
Asp	Asp	Asp	Glu 180	Ile	Gln	Phe	Asp	Asp 185	Ile	Gly	Asp	Asp	Asp 190	Glu-	Asp
Ile	Asp	Asp 195	Ile												•
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	> 21														
	?> PR		apie	ne											
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<220															
	.> SI														
	!> (3					<b>.</b>		11				<b>.</b>			_
~223	- ла	a eq	uais	any	OI	tne	natu	rati	у ос	curr	Tug	L-am	TUO	aCld	5
<220															
	> SI														
	> (7	•	_												
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<400	> 12	42													

Ala Val Xaa Phe Lys Asp Xaa Ile Tyr Glu Ile Phe Gln Lys Leu Asn

1				5	,				10					15	
Thr	Ser	Ile	Gln 20		Val	Leu	Leu	Ser 25		Thr	Met	Pro	Thr		Val
Leu	Glu	Val 35		Lys	Lys	Phe	Met 40		Asp	Pro	Ile	Arg 45	Ile	Leu	Val
Lys	Lys 50		Glu	Leu	Thr	Leu 55	Glu	Gly	Ile	Lys	Gln 60	Phe	туг	Ile	Asn
Val 65	Glu	Arg	Glu	Glu	Trp 70	Lys	Leu	Asp	Thr	Leu 75	Cys	Asp	Leu	Tyr	Glu 80
Thr	Leu	Thr	Ile	Thr 85	Gln	Ala	Val	Ile	Phe 90	Leu	Asn	Thr	Arg	Arg 95	Lys
Val	Asp	Trp	Leu 100	Thr	Glu	Lys	Met	His 105	Ala	Arg	Asp	Phe	Thr 110	Val	Ser
Ala	Leu	His 115	Gly	Asp	Met	Asp	Gln 120	Lys	Glu	Arg	Asp	Val 125	Ile	Met	Arg
Glu	Phe 130	Arg	Ser	Gly	Ser	Ser 135	Arg	Val	Leu	Ile	Thr 140	Thr	Asp	Leu	Leu
Ala 145	Arg	Gly	Ile	Asp	Val 150	Gln	Gln	Val	Ser	Leu 155	Val	Ile	Asn	Tyr	Asp 160
Leu	Pro	Thr	Asn	Arg 165	Glu	Asn	Tyr	Ile	His 170	Arg	Ile	Gly	Arg	Gly 175	Gly
Arg	Phe	Gly	Arg 180	Lys	Gly	Val	Ala	Ile 185	Asn	Phe	Val	Thr	Glu 190	Glu	Asp
Lys	Arg	Ile 195	Leu	Arg	Asp	Ile	Glu 200	Thr	Phe	Tyr	Asn	Thr 205	Thr	Val	Glu
Glu	Met 210	Pro	Met	Asn	Val	Ala 215	Asp	Leu	Ile						
<210															
<211 <212		-													
			apie	ns											
<400															
Leu . 1	Asp	Gly		Ala 5		Ala	Glu :		Ala :		Ser '	/al /	Ala	Val A	Asn

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Val Ala Pro Gly Arg Leu Cys Ala Gly Arg Tyr Ser Ser Asp Val Gln
           20
                            25.
Glu Met Ile Leu Ser Ser Ala Thr Ala Asp Arg Ile Pro Ile Ala Val
       35 40 . . 45
Ser Gly Val Arg Gly Met Gly Phe Leu Met Arg His His Ile Glu Thr
       55.
Gly Gly Gln Leu Pro Ala Lys Leu Ser Ser Leu Phe Val Lys Cys
              .70
                                  75<sup>-</sup>
Leu Gln Asn Pro Ser Ser Asp Ile Arg Leu Val Ala Glu Lys Met Ile
              85 90 95
Trp Trp Ala Asn Lys Asp Pro Leu Pro Pro Leu Asp Pro Gln Ala Ile
Lys Pro Ile Leu Lys Ala Leu Leu Asp Asn Thr Lys Asp Lys Asn Thr
                    120. . . . . 125
Val Val Arg Ala Tyr Ser Asp Gln Ala Ile Val Asn Leu Leu Lys Met
   130 135
Arg Gln Gly Glu Glu Val Phe Gln Ser Leu Ser Lys Ile Leu Asp Val
                150
                                 155
Ala Ser Leu Glu Val Leu Asn Glu Val Asn Arg Ser Pro
             165 - 170
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<211> 222
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<213> Homo sapiens
<220>
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<222> (17)
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<220>
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<222> (72)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 1244
Tyr Ile Lys Ile Tyr Gln Gly Glu Glu Leu Pro His Pro Lys Ser Met
1 5
                        10
```

Xaa Gln Ala Thr Ala Glu Ala Asn Asn Leu Ala Ala Val Ala Thr Ala 20 25 30

Lys Asp Thr Tyr Asn Lys Lys Met Glu Glu Ile Cys Gly Gly Asp Lys 35 40 45

Pro Phe Leu Ala Pro Asn Asp Leu Gln Thr Lys His Leu Gln Leu Lys 50 55 60

Glu Glu Ser Val Lys Leu Phe Xaa Gly Val Lys Lys Met Gly Glu 65 70 75 80

Glu Phe Ser Arg Arg Tyr Leu Gln Gln Leu Glu Ser Glu Ile Asp Glu 85 90 95

Leu Tyr Ile Gln Tyr Ile Lys His Asn Asp Ser Lys Asn Ile Phe His
100 105 110

Ala Ala Arg Thr Pro Ala Thr Leu Phe Val Val Ile Phe Ile Thr Tyr 115 120 125

Val Ile Ala Gly Val Thr Gly Phe Ile Gly Leu Asp Ile Ile Ala Ser 130 135 140

Leu Cys Asn Met Ile Met Gly Leu Thr Leu Ile Thr Leu Cys Thr Trp 145 150 155 160

Ala Tyr Ile Arg Tyr Ser Gly Glu Tyr Arg Glu Leu Gly Ala Val Ile 165 170 175

Asp Gln Val Ala Ala Ala Leu Trp Asp Gln Ala Leu Tyr Lys Leu Tyr 180 185 190

Ser Ala Ala Ala Thr His Arg His Leu Tyr His Gln Ala Phe Pro Thr 195 200 205

Pro Lys Ser Glu Ser Thr Glu Gln Ser Glu Lys Lys Met 210 215 220

<210> 1245

<211> 278

<212> PRT

<213> Homo sapiens

<400> 1245

Ser Ala Glu Asp Val Glu Phe Gln Lys Glu Val Ala Gln Val Arg Lys
1 5 10 15

								23					50		
Tyr	Val	Arg 35	His	Leu	Pro	Asn	Leu 40	Leu	Asp	Glu	Thr	Gln 45	Ile	Phe	Ser
Tyr	Phe 50	Ser	Gln	Phe	Gly	Thr 55	Val	Thr	Arg	Phe	Arg 60	Leu	Ser	Arg	Ser
Lys 65	Arg	Thr	Gly	Asn	Ser 70	Lys	Gly	Туr	Ala	Phe 75	Val	Glu	Phe	Glu	Ser 80
Glu	Asp	Val	Ala	Lys 85	Ile	Val	Ala	Glu	Thr 90	Met	Asn	Asn	Tyr	Leu 95	Phe
Gly	Glu	Arg	Leu 100	Leu	Glu	Cys	His	Phe 105	Met	Pro 	Pro	Glu	Lys 110	Val	His
Lys	Glu	Leu 115	Phe	Lys	Asp	Trp	Asn 120	Ile	Pro	Phe	Lys	Gln 125	Pro	Ser	Tyr
Pro	Ser 130	Val	Lys	Arg	Tyr	Asn 135	Arg	Asn	Arg	Thr	Leu 140	Thr	Gln	Lys	Leu
Arg 145	Met	Glu	Glu	Arg	Phe 150	Lys	Lys	Lys	Glu	Arg 155	Leu	Leu	Arg	Lys	Lys 160
Leu	Ala	Lys	Lys	Gly 165	Ile	Asp	туr	Asp	Phe 170	Pro	Ser	Leu	Ile	Leu 175	Gln
Lys	Thr	Glu	Ser 180	Ile	Ser	Lys	Thr	Asn 185	Arg	Gln	Thr	Ser	Thr 190	Lys	Gly
Gln	Val	Leu 195	Arg	Lys	Lys	Lys	Lys 200	Lys	Val	Ser	Gly	Thr 205	Leu	Asp	Thr
Pro	Glu 210	Lys	Thr	Val	Asp	Ser 215	Gln	Gly	Pro	Thr	Pro 220	Val	Cys	Thr	Pro
Thr	Phe	Leu	Glu	Arg	Arg	Lys	Ser	Gln	Val	Ala	Glu	Leu	Asn	Asp	Asp

230 235 Asp Lys Asp Asp Glu Ile Val Phe Lys Gln Pro Ile Ser Cys Val Lys

Glu Glu Ile Gln Glu Thr Gln Thr Pro Thr His Ser Arg Lys Lys Arg

265

250

270

Arg Ile Thr Gln Arg Lys Lys Gln Glu Gln Leu Thr Pro Gly Val Val

Arg Arg Ser Ser Asn Gln 275

260

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<210> 1246
 <211> 121
<212> PRT
<213> Homo sapiens
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<400> 1246
Ser Pro Pro Pro Leu Ser Leu Ile Leu Leu Ser Pro Ile Lys Ala Lys
                                   10.
Tyr Gly Leu Thr Thr Ser Pro Lys Ser Val Leu Arg Pro Ser Leu Cys
Leu Cys Ala Leu Leu Gly Val Ser Gln Arg Ser Gly Gln Asp Cys Ala
                             40
                                                45
Gly Pro Ala Ser Pro Cys Ala Ser Gln Glu His Arg Gln Gly Val Leu
                         55
Val Ala Val Ala Gly His Leu Ser Pro Ser Ser Leu Leu Asn Val Leu
65
                     70
                              75
Thr Ala Arg Gly Asn Gly Val Ser Phe Pro Thr Lys Lys Pro Leu Leu
Tyr Ile Phe Xaa Leu Gln Ser His Arg Leu Gln Thr Thr Leu Leu Phe
                               105
Phe Met Asp Phe Ser Ala His Phe Arg
       115
                           120
<210> 1247
<211> 36
<212> PRT
<213> Homo sapiens
<400> 1247
Ile Phe His Arg Val Leu Leu Cys Asp Leu Asn Phe Ser Leu Gly Pro
Ala Ser Asp Ile Val Gly Gly Leu Ser Trp Phe Gln Glu Ile Arg Leu
```

3.0

Ala Phe Ser Ser 35

<210> 1248

<211> 184

<212> PRT

<213> Homo sapiens

<400> 1248

Trp Ile Pro Arg Ala Cys Arg Glu Phe Gly Thr Arg Phe Gly Gly Val  $1 \ \ \,$  10  $\ \ \,$  15

Thr Arg Gly Phe Asn Met Arg Ile Glu Lys Cys Tyr Phe Cys Ser Gly 20 25 30

Pro Ile Tyr Pro Gly His Gly Met Met Phe Val Arg Asn Asp Cys Lys  $35 \hspace{1cm} 40 \hspace{1cm} 45$ 

Val Phe Arg Phe Cys Lys Ser Lys Cys His Lys Asn Phe Lys Lys Lys 50 55 60

Arg Asn Pro Arg Lys Val Arg Trp Thr Lys Ala Phe Arg Lys Ala Ala 65 70 75 80

Gly Lys Glu Leu Thr Val Asp Asn Ser Phe Glu Phe Glu Lys Arg Arg 85 90 95

Asn Glu Pro Ile Lys Tyr Gln Arg Glu Leu Trp Asn Lys Thr Ile Asp 100 105 110

Ala Met Lys Arg Val Glu Glu Ile Lys Gln Lys Arg Gln Ala Lys Phe 115 120 125

Ile Met Asn Arg Leu Lys Lys Asn Lys Glu Leu Gln Lys Val Gln Asp 130 135 140

Ile Lys Glu Val Lys Gln Asn Ile His Leu Ile Arg Ala Pro Leu Ala 145 150 155 160

Gly Lys Gly Lys Gln Leu Glu Glu Lys Met Val Gln Gln Leu Gln Glu 165 170 175

Asp Val Asp Met Glu Asp Ala Pro.

<210> 1249

<211> 188

<2	12>	PRT													
			sap	iens											
			•												
	20>														
		SITE													
		(104													
<27	23> :	Xaa (	equa	ls a	ny o	f the	e na	tura	lly d	oc <b>c</b> u	rring	g L-	amino	ac:	ids
		1249													
Gly	Cy:	s Pro	Ala	a His	Se:	rPro	Gly	/ Se	r Ala	a Ly:	s Arg	Tr	Thr	Glr	ı Al
1				5	5				10			•		15	
Ala	Met	. Ser	- Arc	. Pro	) Arc	. Mot			. 17-1		L Thr			_	
			20	)		,	. nr	25		L Va.	LTHE	Ala	ASP 30		Ph
								•	•				30		
Gly	Туг	Cys	Pro	Arg	Arg	Asp	Glu	Gly	, Ile	· Val	Glu	Ala	Phe	Leu	וב
		35	i			_	40					45		2Cu	
Gly	Ala	Val	Thr	Ser	Val	Ser	Leu	Leu	val	Asr	Gly	Ala	Ala	Thr	Gl
	50	)				55					60				
50-	A 1 -	21-	<b>61</b>												
65	ATG	Ald	GIU	reu	Ala	Arg	Arg	His	Ser		Pro	Thr	Gly	Leu	Hi
03					70					75					8
Ala	Asn	Leu	Ser	Glu	Glv	Ara	Bro	12.2	<b>~1</b>		Ala	•	_		
				85	Gry	ni g	FIO	vaı	90		Ala	Arg	Arg		Ala
									,,,					95	
Ser	Ser	Leu	Leu	Gly	Pro	Glu	Xaa	Phe	Phe	Leu	Gly	Lvs	Met	Glv	Phe
			100					105				-1-	110	1	
Arg	Glu	Ala	Val	Ala	Ala	Gly	Asp	Val	Asp	Leu	Pro	Gln	Val	Arg	Ser
		115					120					125		•	
		_													
AIG	130	Tyr	Arg	Arg	Met	Leu	Ala	Arg	Thr	Pro	Arg	Ala	Pro	Pro	Gly
	130					135					140				
Glv	Thr	Val	Ara	Pro	Lau	Glu	T 011		11-1		Asp	<b>5</b> 1	_		
145			9	120	150	GIU	Leu	Ala	Val	155	Asp	Pne	Arg	He	
										133					160
Thr	Leu	Glu	Pro	Ser	His	Gly	Ser	Thr	Ara	Ara	Val	Ser	Ser	Δ1 a	<b>λ1</b> =
				165		•			170	9				175	ara.
Chr	Pro	Gly	Arg	Ser	Arg	Cys	Leu	Ser	Leu	Ala	Leu				
			180					185							

<210> 1250 <211> 201 <212> PRT <213> Homo sapiens

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<220>
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<222> (36)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
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<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (97)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
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<222> (101)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 1250
Arg Lys Asn Leu Glu Ile Tyr Glu Ala Val Thr Ser Pro Gln Gly Pro
Ala Met Thr Trp Ser Met Phe Ala Val Gly Trp Met Glu Leu Lys Asp
                                 25
Ala Cys Gly Xaa Arg Gly Leu Leu Asp Arg Ser Phe Ala Asn Met Ala
         35
                             40
Glu Pro Phe Lys Val Trp Thr Glu Asn Ala Asp Gly Ser Gly Ala Val
                         55
Asn Phe Leu Thr Gly Met Gly Phe Leu Gln Ala Val Val Phe Gly
                     70
                                        75
Cys Thr Gly Phe Arg Val Ser Val Ser Gly Ile Phe Tyr Gln Gly Xaa
                 85
Xaa Leu Asn Phe Xaa Phe Ser Glu Asp Ser Val Thr Val Glu Val Thr
Ala Arg Ala Gly Pro Trp Ala Pro His Leu Glu Ala Glu Leu Trp Pro
        115
                            120
Ser Gln Ser Arg Leu Ser Leu Leu Pro Gly His Lys Val Ser Phe Pro
                        135
Arg Ser Ala Gly Arg Ile Gln Met Ser Pro Pro Lys Leu Pro Gly Ser
                   150
                                       155
```

Ser Ser Ser Glu Phe Pro Gly Arg Thr Phe Ser Asp Val Arg Asp Pro 165 170 Leu Gln Ser Pro Leu Trp Val Thr Leu Gly Ser Ser Ser Pro Thr Glu 185 Ser Leu Thr Val Asp Pro Ala Ser Glu 195 200 Ľa <210> 1251 <211> 266 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (16) <223> Xaa equals any of the naturally occurring L-amino acids <400> 1251 Ser Val Gly Ser Val Ala Ala Ala Thr Arg Thr Gly Pro Val Ser Xaa Lys Lys Phe Arg Glu Ala Ser Trp Arg Phe Thr Phe Tyr Leu Ile Ala 20 25 Phe Ile Ala Gly Met Ala Val Ile Val Asp Lys Pro Trp Phe Tyr Asp Met Lys Lys Val Trp Glu Gly Tyr Pro Ile Gln Ser Thr Ile Pro Ser Gln Tyr Trp Tyr Tyr Met Ile Glu Leu Ser Phe Tyr Trp Ser Leu Leu Phe Ser Ile Ala Ser Asp Val Lys Arg Lys Asp Phe Lys Glu Gln Ile 90 Ile His His Val Ala Thr Ile Ile Leu Ile Ser Phe Ser Trp Phe Ala 105 Asn Tyr Ile Arg Ala Gly Thr Leu Ile Met Ala Leu His Asp Ser Ser Asp Tyr Leu Leu Glu Ser Ala Lys Met Phe Asn Tyr Ala Gly Trp Lys Asn Thr Cys Asn Asn Ile Phe Ile Val Phe Ala Ile Val Phe Ile Ile

147	,				150	•				155	•				160
Thr	Arg	Leu	ı Val	1 11e		Pro	Phe	Trp	11e		His	Cys	Thr	175	ı Val
туг	Pro	Leu	180		Tyr	Pro	Ala	Phe 185		Gly	туг	Туг	Phe 190		. Asn
Ser	Met	Met 195		Val	Leu	Gln	Leu 200		His	Ile	Phe	Trp 205		Tyr	Leu
Ile	Leu 210		Met	Ala	His	Lys 215		lle	Thr	Gly	Lys 220		Val	-Glu	Asp
Glu 225		Ser	Asp	Arg	Glu 230		Thr	Glu	Ser	Ser 235	Glu	Gly	Glu	Glu	Ala 240
Ala	Ala	Gly	Gly	Gly 245		Lys	Ser	Arg	Pro 250		Ala	Asn	Gly	His 255	Pro
Ile	Leu	Asn	Asn 260		His	Arg	Lys	Asn 265	Asp			*			·.
<21	0> 1:	252					-		-						
<21	1> 10	63													
	2> PI														
<21	3> н	omo :	sapi	ens											
	0> 12														•
Lys 1	Met	Gly	Thr	Asn 5	Lys	Cys	Ala	Ser	Gln 10	Ala	Gly	Met	Thr	Ala 15	Tyr
Gly	Thr	Arg	Arg 20	His	Leu	Tyr	Asp	Pro 25	Lys	Met	Gln	Thr	Asp 30	Lys	Pro
Phe	Asp	Gln 35	Thr	Thr	Ile	Ser	Leu 40	Gln	Met	Gly	Thr	Asn 45	Lys	Gly	Ala
Ser	Gln 50	Ala	Gly	Met	Leu	Ala 55	Pro	Gly	Thr	Arg	Arg 60	Asp	Ile-	Tyr	Asp
Gln 65	Lys	Leu	Thr	Leu	Gln 70	Pro	Val '	Asp	Asn	Ser 75	Thr	Ilė	Ser	Leu	Gln 80
Met	Gly	Thr	Asn	Lys 85	Val		Ser	Gln	Lys 90	Gly	Met	Ser	Val	Tyr 95	Gly
Leu	Gly	Arg	Gln 100	Val	Tyr	Asp	Pro	Lys 105	Tyr	Суѕ	Ala	Ala	Pro 110	Thr	Glu -

```
Pro Val Ile His Asn Gly Ser Gln Gly Thr Gly Thr Asn Gly Ser Glu
                              120
 Ile Ser Asp Ser Asp Tyr Gln Ala Glu Tyr Pro Asp Glu Tyr His Gly
     130
 Glu Tyr Gln Asp Asp Tyr Pro Arg Asp Tyr Gln Tyr Ser Asp Gln Gly
                     150
                                                             160
 Ile Asp Tyr
 <210> 1253
 <211> 298
 <212> PRT
 <213> Homo sapiens
 <220>
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 <222> (109)
 <223> Xaa equals any of the naturally occurring L-amino acids
<400> 1253
 Leu Glu Glu Thr Pro Cys Leu Arg Thr Ala Val Ala Cys Glu Gln Arg
Asp Pro Gly Thr Glu Ser Gln Pro Arg Arg Cys Cys Arg Arg Arg Arg
             20
                                 25
Pro Glu Thr Ala Glu Pro Val Arg Pro Pro Pro Pro Pro Thr Pro Asp
Thr Glu His Pro Val Met Asp Lys Asn Glu Leu Val Gln Lys Ala Lys
Leu Ala Glu Gln Ala Glu Arg Tyr Asp Asp Met Ala Ala Cys Met Lys
                     70
Ser Val Thr Glu Gln Gly Ala Glu Leu Ser Asn Glu Glu Arg Asn Leu
Leu Ser Val Ala Tyr Lys Asn Val Val Gly Ala Arg Xaa Ser Ser Trp
Arg Val Val Ser Ser Ile Glu Gln Lys Thr Glu Gly Ala Glu Lys Lys
Gln Gln Met Ala Arg Glu Tyr Arg Glu Lys Ile Glu Thr Glu Leu Arg
```

	130					135					140				
Asp 145	Ile	Cys	Asn	Asp	Val 150		Ser	Leu	Leu	Glu 155	Lys	Phe	Leu	Ile	Pro
Asn	Ala	Ser	Gln	Ala 165	Glu	Ser	Lys	Val	Phe 170	Tyr	Leu	Lys	Met	Lys 175	Gly
Asp	Tyr	туг	Arg 180	туг	Leu	Ala	Glu	Val 185		Ala	Gly	Asp	Asp 190	Lys	Lys
Gly	Ile	Val 195	Asp	Gln	Ser	Gln	Gln 200	Ala	туг	Gln	Glu	Ala 205	Phe	Glu	Ile
Ser	Ļys 210	Lys	Glu	Met	Gln	Pro 215		His	Pro	Ile	Arg 220		Gly	Leu	Ala
Leu 225	Asn	Phe	Ser	Val	Phe 230	_	Tyr	Glu	Ile	Leu 235	Asn	Ser	Pro	Glu	Lys 240
Ala	Суз	Ser	Leu	Ala 245	Lys	Thr	Ala	Phe	Asp 250	Glu	Ala	Ile	Ala	Glu 255	Leu
Asp	Thr	Leu	Ser 260	Glu	Glu	Ser	туг	Lys 265	Asp	Ser	Thr	Leu	Ile 270	Met	Gln
Leu	Leu	Arg 275	Asp	Asn	Leu	Thr	Leu 280	Trp	Thr	Ser	Asp	Thr 285	Gln	Gly	Asp
Glu	Ala 290	Glu	Ala	Gly	Glu	Gly 295	Gly	Glu	Asn	-					
	0> 12 l> 17														
	2> PF														
<213	3> Ho	omo s	apie	ens											
<400	)> 12	254													
Ser 1	Pro	Ala	Arg	Pro 5	Leu	Ile	Arġ	Ser	Asp 10	Lys	Met	Ĺyś	Glu	Thr 15	Ile
Met	Asn	Gln	Glu 20	Lys	Leu	Ala	Lys	Leù 25	Gln	Ala	Gln	Val	Arg 30	Ile	Glý
Gly	Lys	Gly 35	Thr	Ala	Arg	Arg	Lys 40	Lys	Lys	Val	Val	His 45	Arg	Thr	Ala
Thr	Ala 50	Asp	Asp	Lys	Lys	Leu 55	Gln	Phė	Ser	Leu	Lys 60	Lys	Leu	Gly	Val

Asn Asn Ile Ser Gly Ile Glu Glu Val Asn Met Phe Thr Asn Gln Gly 65 70 75 80

Thr Val Ile His Phe Asn Asn Pro Lys Val Gln Ala Ser Leu Ala Ala 85 90 95

Asn Thr Phe Thr Ile Thr Gly His Ala Glu Thr Lys Gln Leu Thr Glu 100 105 110

Met Leu Pro Ser Ile Leu Asn Gln Leu Gly Ala Asp Ser Leu Thr Ser 115 120 125

Leu Arg Arg Leu Ala Glu Ala Leu Pro Lys Gln Ser Val Asp Gly Lys 130 135 140

Ala Pro Leu Ala Thr Gly Glu Asp Asp Asp Asp Glu Val Pro Asp Leu 145 150 155 160

Val Glu Asn Phe Asp Glu Ala Ser Lys Asn Glu Ala Asn 165 170

<210> 1255

<211> 66

<212> PRT

<213> Homo sapiens

<400> 1255

Leu Cys Cys Pro Phe His Ile Lys Glu Leu Leu Thr Thr Lys Ala Ala l

Pro Ala Phe Pro Ile Cys Leu Ser Ile Trp Leu Ala Gly Lys Glu Arg 20 25 30

Thr Cys Met Leu Val Lys Glu Glu Val Gly Trp Lys Lys Trp Gly Gly 35 40 45

Thr Thr Val Lys Ser Arg Val Lys Pro Ser Trp Pro Lys Val Ser Cys 50 55 60

Arg Leu 65

<210> 1256

<211> 389

<212> PRT

<213> Homo sapiens

<400	0> 1	256													
			Gly	Pro 5		Ala	Arg	Ala	Ala 10		Ala	Met	Ala	Ile 15	
Phe	Leu	Glu	Val 20	Ile	Lys	Pro	Phe	Cys 25		Ile	Leu	Pro	Glu 30	Ile	Gln
Lys	Pro	Glu 35	Arg	Lys	Ile	Gln	Phe 40	Lys	Glu	Lys	Val	Leu 45	-	Thr	Ala
Ile	Thr 50	Leu	Phe	lle	Phe	Leu 55	Val	Суз	Суэ	Gln	Ile 60		Leu	Phe	Gly
Ile 65	Met	Ser	Ser	Asp	Ser 70	Ala	Asp	Pro	Phe	Tyr 75	Trp	Met	Arg	Val	Ile 80
Leu	Ala	Ser	Asn	Arg 85	Glý	Ťhr	Leu	Met	Glu 90	Leu	Gly	Ile	Ser	Pro 95	Ile
Val	Thr	Ser	Gly 100	Leu	Ile	Met	Gln	Leù 105	Leu	Ala	Gly	Ala	Lys 110	Ile	Île
Glu	Val	Gly 115	Asp	Thr	Pro	Lys	Asp 120	Arg	Ala	Leu	Phe	Asn 125	Gly	Ala	Gln
Lys	Leu 130	Phe	Gly	Met	Ile	Ile 135	Thr	Ile	Gly	Gln	Ser 140	Ile	Val	Tyr	Val
Met 145	Thr	Gly	Met	Tyr	Gly 150	Asp	Pro	Ser	Glu	Met 155	Gly	Ala	Gly	Ile	Cys 160
Leu	Leu	Ile	Thr	Ile 165	Gln	Leu	Phe	Val	Ala 170	Gly	Leu	Ile	Val	Leu 175	Leu
Leu	Asp	Glu	Leu 180	Leu	Gln	Lys	Gly	Tyr 185	Gly	Leu	Gly	Ser	Gly 190	Ile	Ser
Leu	Phe	Ile 195	Ala	Thr	Asn	Ile	Сув 20 <b>0</b>	Glu	Thr	Ile	Val	Trp 205	Lys	Ala	Phe
Ser	Pro 210	Thr	Thr	Val-	Asn	Thr 215	Gly	Arg	Gly	Met	Glu 220	Phe	Glu	Gly	Ala
Ile 225	Ile	Ala	Leu	Phe	His 230	Leu	Leu	Ala	Thr	Arg 235	Thr	Asp	Lys	Val	Arg 240
Ala	Leu	Arg	Glu	Ala 245	Phe	Tyr	Arġ	Gln	Asn 250	Leu	Pro	Asn	Leu	Met 255	Asn
Leu	Ile	Ala	Thr	Ile	Phe	Val	Phe	Ala	Val	Val	Ile	Tyr	Phe	Gln	Gly

260 265 270 Phe Arg Val Asp Leu Pro Ile Lys Ser Ala Arg Tyr Arg Gly Gln Tyr 275 280 Asn Thr Tyr Pro Ile Lys Leu Phe Tyr Thr Ser Asn Ile Pro Ile Ile Leu Gln Ser Ala Leu Val Ser Asn Leu Tyr Val Ile Ser Gln Met Leu 305 310 Ser Ala Arg Phe Ser Gly Asn Leu Leu Val Ser Leu Leu Gly Thr Trp 330 Ser Asp Thr Ser Ser Gly Gly Pro Ala Arg Ala Tyr Pro Val Gly Gly 345 Leu Cys Tyr Tyr Leu Ser Pro Pro Trp Ser Met Asn Ser Thr Gly Thr 355 Ser Pro Gln Pro Arg Pro Leu Val Gly Cys Ala Ser Gly Pro Ser Arg 375 Ser Trp Leu Thr Ser 385 <210> 1257 <211> 191 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (2) <223> Xaa equals any of the naturally occurring L-amino acids <400> 1257 Gly Xaa Pro Ser Ser Arg Ala His Ser Pro Met Ile Ala Val Gly 10 Ser Asp Asp Ser Ser Pro Asn Ala Met Ala Lys Val Gln Ile Phe Glu 20 Tyr Asn Glu Asn Thr Arg Lys Tyr Ala Lys Ala Glu Thr Leu Met Thr Val Thr Asp Pro Val His Asp Ile Ala Phe Ala Pro Asn Leu Gly Arg

55

Ser Phe His Ile Leu Ala Ile Ala Thr Lys Asp Val Arg Ile Phe Thr 65 70 75 80

Leu Lys Pro Val Arg Lys Glu Leu Thr Ser Ser Gly Gly Pro Thr Lys

85 90 95

Phe Glu Ile His Ile Val Ala Gln Phe Asp Asn His Asn Ser Gln Val

Trp Arg Val Ser Trp Asn Ile Thr Gly Thr Val Leu Ala Ser Ser Gly 115 120 125

Asp Asp Gly Cys Val Arg Leu Trp Lys Ala Asn Tyr Met Asp Asn Trp 130 135 140

Lys Cys Thr Gly Ile Leu Lys Gly Ash Gly Ser Pro Val Ash Gly Ser 145 150 155 160

Ser Gln Gln Gly Thr Ser Asn Pro Ser Leu Gly Ser Asn Ile Pro Ser 165 170 175

Leu Gln Asn Ser Leu Asn Gly Ser Ser Ala Gly Arg Lys His Ser 180 185 190

<210> 1258

<211> 458

<212> PRT

<213> Homo sapiens

<400> 1258

Pro Gly Ala Arg His Gly Ser Ala Ser Ala Pro Thr Leu Phe Pro Leu

1 5 10 15

Val Ser Cys Glu Asn Ser Pro Ser Asp Thr Ser Ser Val Ala Val Gly
20 25 30

Cys Leu Ala Gln Asp Phe Leu Pro Asp Ser Ile Thr Phe Ser Trp Lys 35 40 45

Tyr Lys Asn Asn Ser Asp Ile Ser Ser Thr Arg Gly Phe Pro Ser Val.
50 55 60

Leu Arg Gly Gly Lys Tyr Ala Ala Thr Ser Gln Val Leu Leu Pro Ser 65 70 75 80

Lys Asp Val Met Glm Gly Thr Asp Glu His Val Val Cys Lys Val Gln 85 90 95

His Pro Asn Gly Asn Lys Glu Lys Asn Val Pro Leu Pro Val Ile Ala

			100					105					110		
Glu	Leu	Pro 115	Pro	Lys	Val	Ser	Val 120	Phe	Val	Pro	Pro	Arg 125	Asp	Gly	Phe
Phe	Gly 130	Asn	Pro	Arg	Lys	Ser 135	Lys	Leu	Ile	Cys	Gln 140	Ala	Thr	Gly	Phe
Ser 145	Pro	Arg	Gln	Ile	Gln 150	Val	Ser	Trp	Leu	Arg 155	Glu	Gly	Lys	Gln	Val 160
Gly	Ser	Gly	Val	Thr 165	Thr	Asp	Gln	Val	Gln 170	Ala	Glu	Ala	Lys	Glu 175	Ser
Gly	Pro	Thr	Thr 180	Tyr	Lys	Val	Thr	Ser 185	Thr	Leu	Thr	Ile	Lys 190	Glu	Ser
Asp	Trp	Leu 195	Ser	Gln	Ser	Met	Phe 200	Thr	Cys	Arg	Val	Asp 205	His	Arg	Gly
Leu	Thr 210	Phe	Gln	Gln	Asn	Ala 215	Ser	Ser	Met	Cys	Val 220	Pro	Asp	Gln	Asp
225					230	Ala				235					240
Leu	Thr	Lys	Ser	Thr 245	Lys	Leu	Thr	Cys	Leu 250	Val	Thr	Asp	Leu	Thr 255	Thr
Tyr	Asp	Ser	Val 260	Thr	Ile	Ser	Trp	Thr 265	Arg	Gln	Asn	Gly	Glu 270	Ala	Val
Lys	Thr	His 275	Thr	Asn	Ile	Ser	Glu 280	Ser	His	Pro	Asn	Ala 285	Thr	Phe	Ser
Ala	Val 290	Gly	Glu	Ala	Ser	Ile 295	Cys	Glu	Asp	Asp	Trp 300	Asn	Ser	Gly	Glu
Arg 305	Phe	Thr	СЛа	Thr	Val 310	Thr	His	Thr	Asp	Leu 315	Pro	Ser	Pro	Leu	Lys 320
Gln	Thr	Ile	Ser	Arg 325	Pro	Lys	Gly	Val	Ala 330	Leu	His	Arg	Pro	Asp 335	Val
Tyr	Leu	Leu	Pro 340	Pro	Ala	Arg	Glu	Gln 345	Leu	Asn	Leu	Arg	Glu 350	Ser	Ala
Thr	Ile	Thr 355	Суѕ	Leu	Val	Thr	Gly 360	Phe	ser	Pro	Ala	Asp 365	Val	Phe	Val
Gln	Trp	Met	Gln	Arg	Glv	Gln	Pro	Leu	Ser	Pro	Glu	Lys	Tyr	Val	Thr

	370					375					380	)			
Ser 385		Pro	Met	Pro	Glu 390		Gln	Ala	Pro	Gly 395		Tyr	Phe	Ala	His 400
Ser	Ile	Leu	Thr	Val 405		Glu	Glu	Glu	Trp 410		Thr	Gly	Glu	Thr 415	_
Thr	Cys	Val	Val 420	Ala	His	·Glu	Ala	Leu 425		Asn	Arg	Val	Thr 430		Arq
Thr	Val	Asp 435		Ser	Thr	Gly	Lys 440	Pro	Thr	·Leu	. Tyr	Asn 445		Ser	Leu
Val	Met 450		Asp	Thr	Ala	Gly 455		Cys	Tyr		•		•	٠.	
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Arg	Val	Ile 35	His	Leu	Ala	Gly	Gln 40	Trp	Glu	Lys	His	Arg 45	Val	Pro	Leu
Leu	Ala 50	Glu	Tyr	Arg	His	Leu 55	Arg	Lys	Leu	Gln	Asp 60	Cys	Arg	Glu	Leu
3lu 65	Ser	Ser	Arg	Arg	Leu 70	Ala	Glu	Ile	Gln	Glu 75	Leu	His	Gln	Ser	Val 80
Arg	Ala	Ala	Ala	Glu 85	Glu	Ala	Arg	Arg	Lys 90	Glu	Glu	Val	Tyr	Lys 95	Gln
Leu	Met	Ser	Glu 100	Leu	Glu	Thr		Pro 105	Arg	Asp	Val	Ser	Arg 110	Leu	Ala

1283

170

Tyr Thr Gln Arg Ile Leu Glu Ile Val Gly Asn Ile Arg Lys Gln Lys 115 120 125

Glu Glu Ile Thr Lys Ile Leu Ser Asp Thr Lys Glu Leu Gln Lys Glu 130 135 140

Ile Asn Ser Leu Ser Gly Lys Leu Asp Arg Thr Phe Ala Val Thr Asp

Glu Leu Val Phe Lys Asp Ala Lys Lys Asp Asp Ala Val Arg Lys Ala

Tyr Lys Tyr Leu Ala Ala Leu His Glu Asn Cys Ser Gln Leu Ile Gln 180 185 190

Thr Ile Glu Asp Thr Gly Thr Ile Met Arg Glu Val.Arg Asp Leu Glu 195 200  $\cdot$  205

Glu Gln Ile Glu Thr Glu Leu Gly Lys Lys Thr Leu Ser Asn Leu Glu 210 215 220

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1				5					10					15	•
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Gly	Pro	Pro		Arg	Pro	Trp	Arg	-	Arg	Pro	Gln	Ser		Ile	Tyr
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_	_					_		_			_		_		
Asp	Pro			Gly	Met	_			_	Gln	-		Leu	Ile	Thr
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Leu	50	GIU	GIN	vai	ьys	55	GIY	ile	var	Asn	60	Asp	GIU	АТА	var
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T.OU	uie	Pha	T ve	Glu	Trn	Gl n	Len	Δen	Gln	Lys	Yaa-	Ara	Ser	Glu	Ser
65	1113	File	пуз	Gru	70	GIII	Dea	AJII	GIII	75	лии	nr 9	561	014	80
0.5					, 0					, ,					00
Phe	Ara	Phe	Gln	Gln	Glu	Asn	T.eu	T.vs	Ara	Leu	Ara	Asp	Ser	Tle	Thr
	9		· · · ·	85	010			_,_	90					95	
Arq	Ara	Gln	Arq	Glu	Lvs	Gln	Lvs	Ser	Glv	Lys	Gln	Thr	Asp	Leu	Glu
_	•		100				•	105	•	•			110		
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Thr	Glu	Leu	Arg	Arg	Gly	Asp	Trp	Lys	Thr	Asp	Ser	Thr	Ser	Ser	Thr
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Met Xaa Leu Glu Arg Pro Pro Arg Val Pro Pro Arg Ala Ala Ser Gln
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Phe	Leu 50	Ala	Val	Asn	Gly	Leu 55	Tyr	Ser	Ser	Ser	Asp 60	_	Val	Ile	Glu
Leu 65	Thr	Pro	Ser	Asn	Phe 70	Asn	Arg	Glu	Val	Ile 75		Ser	Asp	Ser	Leu 80
Trp	Leu	Val	Glu	Phe 85	Tyr	Ala	Pro	Trp	Cys 90		His	Cys	Gln	Arg 95	Leu
Thr	Pro	Glu	Trp 100	Lys	Lys	Ala	Ala	Thr 105	Ala	Leu	Lys	Asp	Val 110	Val	Lys
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Val	Leu 210	Asp	Ser	Glu	Asp	Val 215	Trp	Met	Val	Glu	Phe 220		Ala	Pro	Trp
Cys 225	Gly	His	Cys	Lys	Asn 230	Leu	Glu	Pro	Glu	Trp 235	Ala	Ala	Ala	Ala	ser 240
Glu	Val	Lys	Glu	Gln 245	Thr	Lys	Gly	Xaa	Val 250	Lys	Leu	Ala	Ala	Val 255	Asp
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Pro Thr Ile Lys Ile Phe Gln Lys Gly Glu Ser Pro Val Asp Tyr Asp 275 280 Gly Gly Arg Thr Arg Ser Asp Ile Val Ser Arg Ala Leu Asp Leu Phe 290 295 Ser Asp Asn Ala Pro Pro Pro Glu Leu Leu Glu Ile Ile Asn Glu Asp Ile Ala Lys Arg Thr Cys Glu Glu His Gln Leu Cys Val Val Ala Val 330 Leu Pro His Ile Leu Asp Thr Gly Ala Ala Gly Arg Asn Ser Tyr Leu 340 345 Glu Val Leu Leu Lys Leu Ala Asp Lys Tyr Lys Lys Lys Met Trp Gly Trp Leu Trp Thr Glu Ala Gly Ala Gln Ser Glu Leu Glu Thr Ala Leu 375 Gly Ile Gly Gly Phe Gly Tyr Pro Ala Met Ala Ala Ile Asn Ala Arg Lys Met Lys Phe Ala Leu Leu Lys Gly Ser Phe Ser Glu Gln Gly Ile 405 410 Asn Glu Phe Leu Arg Glu Leu Ser Phe Gly Arg Gly Ser Thr Ala Pro Val Gly Gly Gly Ala Phe Pro Thr Ile Val Glu Arg Glu Pro Trp Asp 440 Gly Arg Asp Gly Glu Leu Pro Val Glu Asp Asp Ile Asp Leu Ser Asp Val Glu Leu Asp Asp Leu Gly Lys Asp Glu Leu 470 <210> 1264 <211> 398 <212> PRT <213> Homo sapiens <220> <221> SITE

<223> Xaa equals any of the naturally occurring L-amino acids

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	Ala 65	Pro	His	Leu	Gln	Leu 70	Ile	Glu	Gly	Lys	Ser 75	Ser	His	Glu	Thr	Leu 80
	Asn.	Ile	Val	Glu	Glu 85	Lys	Lys	Arg	Ala	Glu 90	Val	Gly	Lys	Asp	Glu 95	Arg
	Val	Ile	Thr	Glu 100	Glu	Met	Asn	Gly	Lys 105	Glu	Ile	Ser	Pro	Gly 110	Ser	Gly
	Pro	Gly	Glu 115	Ile	Arg	Lys.	Val	Glu 120	Pro	Val	Thr	Gln	Lys 125	Asp	Ser	Thr
	Ser	Leu 130	Ser	Ser	Glu	Ser	Ser 135	Ser	Ser	Ser	Ser	Glu 140	Ser	Glu	Glu	Glu
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,	Val	Thr	Gln 195	Ala	Gly	Ala	Ser	Val 200	Ile	Thr	Val	Glu	Thr 205	Val	Ile	Gln
(	3lu	Asn 210	Val	Gly	Ala	Gln	Lys 215	Ile	Pro	Gly	Glu	Lys 220	Ser	Val	His	Glu
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270

Ile	Ser	<b>Asp</b> 275	Ala	Ser	Gln	Arg	Thr 280	Glu	ılle	e Ser	Thr	Lys 285		Val	Pro
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Thr	Val	Lys	Gly 340	Gly	Ile	Ser	Glu	Thr 345		Ile	Glu	Lys	Arg 350	Ile	Val
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Pro i	Arg '	Tyr	Pro 20	Arg	Ser :	Ser	Ile	Glu 25	Asp	Asp	Phe	Asn	Tyr 30	Gly :	Ser
Ser \	/al /	Ala : 35	Ser	Ala '	Thr \	Val :	His 40	Ile	Arg	Met .	Ala	Phe 45	Leu .	Arg 1	Lys
/al 1	yr :	Ser :	Ile :	Leu :	Ser I	Leu (	Gln '	Val	Leu	Leu '	Thr 60	Thr	Val '	Thr S	Ser

Thr 65	Val	. Phe	Leu	ту:	70		ı Ser	. Val	. Arg	75 75		val	His	Glu	Ser 80
Pro	Ala	Leu	Ile	Leu 85	Leu	Phe	Ala	Leu	Gly 90		Leu	Gly	, Leu	Ile 95	
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Phe	Gly	Phe 115		Leu	Leu	Glu	Ala 120		Thr			Val 125		Val	Thr
Phe	Tyr 130		Val	Tyr	Ile	Ile 135		Gln					Thr	Thr	Thr
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Ser	Lys	Phe	Gly	Ala 165	Gly	Leu					Trp	Ile	Leu	Cys 175	Leu
Ser	Gly	Phe	Leu 180		Phe	Phe	Phe	Tyr 185	Ser	Glu	Ile	Met	Glu 190	Leu	Val
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Leu	Ala	Met	Ala 20	Gln	Leu	Cys	Gly	Leu 25	Arg	Arg	Ser	Arg	Ala 30	Phe	Leu
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Cys 65	Arg	Ala	Ser	Met	Pro 70	Arg	Trp	Trp	Tyr	Asn 75	Val	Thr	Asp	Gly	Ser 80
Cvs	Gln	Leu	Phe	Val	Tvr	Glv	Glv	Cvs	Asp	Glv	Asn	Ser	Asn	Asn	ጥህተ

1291

85 90 95 Leu Thr Lys Glu Glu Cys Leu Lys Lys Cys Ala Thr Val Thr Glu Asn 100 105 Ala Thr Gly Asp Leu Ala Thr Ser Arg Asn Ala Ala Asp Ser Ser Val 120 Pro Ser Ala Pro Arg Arg Gln Asp Ser Glu Asp His Ser Ser Asp Met 130 135 Phe Asn Tyr Glu Glu Tyr Cys Thr Ala Asn Ala Val Thr Gly Pro Cys 145 150 155 Arg Ala Ser Phe Pro Arg Trp Tyr Phe Asp Val Glu Arg Asn Ser Cys Asn Asn Phe Ile Tyr Gly Gly Cys Arg Gly Asn Lys Asn Ser Tyr Arg 185 Ser Glu Glu Ala Cys Met Leu Arg Cys Phe Arg Gln Glu Asn Pro 200 Pro Leu Pro Leu Gly Ser Lys Val Val Val Leu Ala Gly Leu Phe Val 210 Met Val Leu Ile Leu Phe Leu Gly Ala Ser Met Val Tyr Leu Ile Arg 230 Val Ala Arg Arg Asn Gln Glu Arg Ala Leu Arg Thr Val Trp Ser Ser 250 Gly Asp Asp Lys Glu Gln Leu Val Lys Asn Thr Tyr Val Leu Cys Arg 260 265

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		267							_		_	_	1		_
Arg 1		Ar	g Aro	g xaa 5		Ala	Ser	Leu	Arç 10	_	Trp	Pro	Val	Arg 15	_
Gly	Met	: G1	y Arg 20		Gln	Leu	Phe	Glu 25		e Ser	Leu	Ser	His 30	Gly	Arg
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Ser 65	Cys	G1	y Val	. Ser	Asn 70	-	Ala		Asp	7hr		<b>Trp</b>		Val	Glu 80
Glu	Gly	ту	r Phe	Asn 85					Leu 90		Asp			Ser 95	Leu
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Ile	Glu	Gl	n Pro	165	Val	Ala	Ser		Thr 170	-	Lys	Phe	Ser	Tyr 175	Lys
Leu	Val	Ly	s Thr 180	_	Ser	Val	Val	Leu 185	Thr	Ala	Ser	Thr	Asp 190	Leu	Arg
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Phe	Ile	]. 195		Lys	Ala	туг	Leu 200	Ile	Asn	Cys	Val	Trp 205	Asn	Cys	Tyr
Lys	Тут 210	: Ile	Asn	Asn	Arg	Asn 215	Val	Pro	Glu	Ile	Ala 220		туг	Pro	Ala
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Lys	Met	Pro	Glu	Lys 245	Glu	Pro	Pro	Pro	Pro 250	туг	Leu	Pro	Ala		
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1295

PCT/US00/05882

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Phe	Asp	Lys	Tyr 20		Gly	Asn	Thr	Tyr 25		Val	Gly	Asp	Thr 30		Glu
Arg	Pro	Lys 35		Ser	Met	Ile	Trp 40	Asp	Cys	Thr	Cys	Ile 45		Ala	Gly
Arg	Gly 50		Ile	Ser	Суз	Thr 55	Ile	Ala	Asn	Arg	Cys 60		Glu	Gly	Gly
Gln 65	Ser	Tyr	Lys		Gly 70			Trp	Arg	Arg 75	Pro	His	Glu	Thr	Gly 80
Gly	Tyr	Met	Leu	Glu 85		Val		Leu		Asn	Gly	Lys	Gly	Glu 95	Trp
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Ser		Val 115			Glu	Thr	Trp 120	Glu	Lys	Pro	Tyr	Gln 125	Gly	Trp	Met
Met	Val 130	Asp	CAa	Thr		Leu 135		Glu	Xaa	Ser	Gly 140	Arg	Ile	Thr	Cys
Thr 145	Ser	Arg	Asn		Cys 150	Asn			Asp		Arg		Ser		Glu 160
Xaa	Glu	Thr	Хаа		٠.	٠.		• •							
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Leu	Thr	Ser 35	Asp	Ile	Ser	Ala	Pro 40	Phe	Thr	Arg	Arg	Asn 45	Pro	Gly	Ala
Cl v	212	A ===	Co=	N 1 -	c1	tra 1	mb	Wat.	mh-	*	212	~1		*	

	50	1				5 5	ı				60	)			
Gly 65		Leu	Arg	Asp	Lys 70		Asp	Gly	'Asn	Glu 75		ı Asp	) Leu	Ser	Le:
Ser	Asp	Leu	Asn	Glu 85		Pro	Val	Lys	90		Ala	ı Ala	Leu	Pro 95	
Ala	Thr	Ile	Leu 100	Asp	Leu	Ser	Cys	Asn 105		Leu	Thr	Thr	Leu 110		Sei
Asp	Phe	Cys 115	Gly	Leu	Thr	His	Leu 120		Lys	Leu	Asp	Leu 125		Lys	Ası
Lys	Leu 130		Gln	Leu	Pro	Ala 135		Phe	Gly	Arg	Leu 140		Asn	Leu	Glr
His 145	Leu	Asp	Leu	Leu	Asn 150	Asn	Lys	Leu	Val	Thr 155		Pro	Val	Ser	Phe 160
Ala	Gln	Leu	Lys	Asn 165	Leu	Lys	Trp	Leu	Asp 170	Leu	Lys	Asp	Asn	Pro 175	Leu
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Cys	Lys	Gln 195	Cys	Ala	Asn	Lys	Val 200	Leu	Gln	His	Met	Lys 205	Ala	Val	Glm
Ala	Asp 210	Gln	Glu	Arg	Glu	Arg 215	Gln	Arg	Arg	Leu	Glu 220	Val	Glu	Arg	Glu
Ala 225	Glu	Lys	Lys	Arg	Glu 230	Ala	Lys	Gln	Arg	Ala 235	Lys	Glu	Ala	Gln	G1u 240
Arg	Glu	Leu	Arg	Lys 245	Arg	Glu	Lys	Ala	Glu 250	Glu	Lys	Glu	Arg	Arg 255	Arg
Lys	<b>Gl</b> u	Tyr	Asp 260	Ala	Leu	Lys	Ala	Ala 265	Lys	Arg	Glu	Gln	Glu 270	Lys	Lys
Pro	Lys	Lys 275	Glu	Ala	Asn	Gln	Ala 280	Pro	Lys	Ser	Lys	Ser 285	Gly	Ser	Arg
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Lys 305	Leu	Leu	Leu	Leu	Leu 310	Leu	Leu	Phe	Gly	Val 315	Ala	Gly	Gly	Leu	Val 320
Ala	Cys	Arg	Val	Thr	Glu	Leu	Gln	Gln	Gln	Pro	Leu	cys	Thr	ser	Val

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WO 00/55350

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Leu Leu His Val Leu Gly Leu Ser Phe Leu Leu Gln Thr Arg Arg Pro  $35 \hspace{1cm} 40 \hspace{1cm} 45$ 

Ile Leu Leu Cys Ser Pro Arg Leu Met Lys Pro Leu Val Val Phe Val 50  $\,^{\circ}$  60  $^{\circ}$ 

Leu Gly Gly Pro Gly Ala Gly Lys Gly Thr Gln Cys Ala Arg Ile Val 65 70 75 80

Glu Lys Tyr Gly Tyr Thr His Leu Ser Ala Gly Glu Leu Leu Arg Asp 85 90 95

Glu Arg Lys Asn Pro Asp Ser Gln Tyr Gly Glu Leu Ile Glu Lys Tyr 100 105 110

Ile Lys Glu Gly Lys Ile Val Pro Val Glu Ile Thr Ile Ser Leu Leu

Lys Arg Glu Met Asp Gln Thr Met Ala Ala Asn Ala Gln Lys Asn Lys 130 135 140

Phe Leu Ile Asp Gly Phe Pro Arg Asn Gln Asp Asn Leu Gln Gly Trp

145					150					155					160
Asn	Lys	Thr	Met	Asp 165	_	Lys	Ala	-	Val 170		Phe		Leu		Phe
Asp	Cys	Asn	Asn 180		Ile	Суз	Ile	Glu 185	Arg	Cys	Leu	Glu	Arg 190		Lys
Ser	Ser	Gly 195		Ser	_		Asn 200				Leu	Glu 205	-	Arg	Ile
Gln	Thr 210	Tyr	Leu	Gln	Ser		Lys			Ile :::			Tyr	Glu	Glu
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Phe	Asp	Glu	Val	Val 245		Ile		-	_	Glu 	-				
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Asp	Ser	Xaa 35	Ser	Lys	Leu	Val	Glu 40	Asn	Cys	Val	Cys	Leu 45	Leu	Arg	Asn
Leu	Ser 50	Tyr	Gln	Val	His	Arg 55	Glu	.Ile	Pro.	Gln	Ala 60	Glu	Arg	Tyr	Gln
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Tyr	Glu	Leu 115		Phe	Gln	Pro	Glu 120		Val	. Arg	Ile	туг 125		Ser	Leu
Leu	Lys 130		Ser	Lys	Thr	Pro 135		Ile	Leu	Glu	Ala 140	Ser	Ala	Gly	Ala
11e 145	Gln	Asn	Leu	Cys	Ala 150	Gly	Arg	Trp	Thr	Туг 155	Gly	Arg	туг	Ile	Arg 160
Ser	Ala	Leu	Arg	Gln 165	Glu	Lys	Ala	Leu	Ser 170		Ile	Ala	Asp	Leu 175	Leu
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Asn	Leu	Ala 195	Val	Asp	Ala	Arg	Asn 200	Lys	Glu	Leu	Ile	Gly 205	Lys	His	Ala
Ile	Pro 210	Asn	Leu	Val	Lys	Asn 215	Leu	Pro	Gly	Gly	Gln 220	Gln	Asn	Ser	Ser
Trp 225	Asn	Phe	Ser	Glu	Asp 230	Thr	Val	Ile	Ser	11e 235	Leu	Asn	Thr	Ile	Asn 240
Glu	Val	Ile	Ala	Glu 245	Asn	Leu	Glu	Ala	Ala 250	Lys	Lys	Leu	Arg	Glu 255	Thr
Gln	Gly	Ile	Glu 260	Lys	Leu	Val	Leu	11e 265	Asn	Lys	Ser	Gly	Asn 270	Arg	Ser
Glu	Lys	Glu 275	Val	Arg	Ala	Ala	Ala 280	Leu	Val	Leu	Gln	Thr 285	Ile	Trp	Gly
Tyr	Lys 290	Glu	Leu	Arg	Lys	Pro 295	Leu	Glu	Lys	Glu	Gly 300	Trp	Lys	Lys	Ser
Asp 305	Phe	Gln	Val	Asn	Leu 310	Asn	Asn	Ala	Ser	Arg 315	Ser	Gln	Ser	Ser	His 320
Ser	Tyr	Asp	Asp	Ser 325	Thr	Leu	Pro	Leu	11e 330	Asp	Arg	Asn	Gln	Lys 335	Ser
Asp	Lys	Lys	Pro 340	Asp	Arg	Glu	Glu	11e 345	Gln	Met	Ser	Asn	Met 350	Gly	Ser
Asn	Thr	Lys 355	Ser	Leu	Asp	Asn	Asn 360	Tyr	Ser	Thr	Pro	Asn 365	Glu	Arg	Gly

Asp	His 370	Asn	Arg	Thr	Leu	375	Arg	Ser	Gly	Asp	380		Asp	) Met	. Glu
Pro 385		Lys	Gly	Thr	Thr 390		Leu	Met	Glr	395		Gly	Gln	Glu	Ser 400
Leu	Glu	Glu	Glu	Leu 405		Val	Leu	Val	. Leu 410		Asp	Glu	Gly	Gly 415	
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1				. 5								2,0		15	
Lys	Cys	Ile	Arg 20	Thr	Pro		Ile	Ser 25		Pro			Phe 30		Leu
Ser	Gly	Cys 35	Thr	Ser		Lys	Thr 40	Tyr		Ala	Lys	Phe .45	Cys	Gly	Val
Cys	Thr 50	Asp	Gly	Arg	Cys	Cys 55	Thr	Pro	His	Arg	Thr	Thr	Thr	Leu	Pro
Val 65	Glu	Phe	Lys	Cys	Pro 70	Asp	Gly	Glu	Val	Met 75	Lys	Lys	Asn	Met	Met 80
Phe	Ile	Lys	Thr	Cys 85			His		Asn 90		Pro			Asn 95	Asp
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1303

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Lys	Суѕ	Ser	Val 260		Lys	Lys	Ser	Glu 265		Glu	Ser	Val	Leu 270		Gln
Leu	Asp	Asn 275	_	Gly	Gln	Gln	Glu 280		Ala	Asp	Leu	Phe 285		Asn	Tyr
Asn	Val 290		Ser	Pro	Ile	Thr 295	_	Asn	Asp	Leu	Ser 300		Pro	Val	Ser
Phe 305		Leu		Phe :	Lys 310	Thr	Phe	Ile	Gly	Pro 315	-	Gly	Asn	Met	Pro 320
Gly	Tyr	Leu	Arg	Pro 325	Glu	Thr	Ala	Gln	Gly 330		Phe	Leu	Asn	Phe	-
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Ile	Gly	Asn 355	Ser	Phe	Arg	Asn	Glu 360			Pro		365	_	Leu	
Arg	Val 370		Glu	Phe	Thr	Met 375								Asp	Pro
Ser 385	Glu	Lys	Asp	His	Pro 390					Val 395					Leu 400
Týŕ	Leu	Tyr			Lys										
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Leu	Gly	Tyr 435		Ile	Gly		Ile 440	Tyr	Leu	Tyr	Leu	Thr 445	Lys	Val	Gly
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Ala 465	His	Tyr	Ala		Asp 470	Cys	Trp	Asp		Glu 475		-	Thr		Tyr 480
Gly					Val										
Ser	Cys	His	Ala 500	Arg	Ala	Thr		Val 505		Leu	Val		Glu 510		
Leu	Lys	Glu 515		_	Thr		Asn 520	Val	Val	Gln		Glu 525	Pro	Ser	Lys

Gly	Ala 530	Ile	Gly	Lys	Ala	Туг 535	Lys	Lys	Asp	Ala	Lys 540	Leu	Val	Met	Glu
Туг 545	Leu	Ala	Ile	Cys	Asp 550	Glu	Cys	Tyr	Ile	Thr 555	Glu	Met	Glu	Met	Leu 560
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Gln	Leu	Thr	Lys 580	Asp	Met	Ile	Asn	Val 585	Lys	Arg	Phe	Gln	Lys 590	Thr	Leu
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Phe	Val	Lys	Glu 660	Leu	Ser	Glu	Ala	Leu 665	Thr	Arg	His	Gly	Val 670	Ser	His
Lys	Val	Asp 675	Asp	ser	Ser	Gly	Ser 680	Ile	Gly	Arg	Arg	Tyr 685	Ala	Arg	Thr
Asp	Glu 690	Ile	Gly	Val	Ala	Phe 695	Gly	Val	Thr	Ile	Asp 700	Phe	Asp	Thr	Val
Asn 705	Lys	Thr	Pro	His	Thr 710	Ala	Thr	Leu	Arg	Asp 715	Arg	Asp	Ser	Met	Arg 720
Gln	Ile	Arg	Ala	Glu 725	Ile	Ser	Glu	Leu	Pro 730	Ser	Ile	Val	Gln	Asp 735	Leu
Ala	Asn	Gly	Asn 740	Ile	Thr	Trp	Ala	Asp 745	Val	Glu	Ala	Arg	Tyr 750	Pro	Leu
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<sup>&</sup>lt;211> 386

<sup>&</sup>lt;212> PRT

<sup>&</sup>lt;213> Homo sapiens

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Leu	Leu		Pro 20			Leu	Cys		Arg				Leu 30		Gly
Туг	Arg		Arg				Leu '40								Trp
Arg							Arg								
Gly 65		Asp	Thr	Ala		Asp			Phe			Val	Tyr	Trp	Leu 80
Val	Asp			Ile 85			Phe	Gly			Phe	Val		Leu 95	
Ile	Val		Thr 100		Ser	Ile	Val	Ala 105		Ala		Leu	Cys	Val	Leu
Pro	Leu	Ile 115	Leu	Arg	Thr	Туг	Ser 120		Pro	Arg		Cys 125	-	His	Phe
Phe			His				Ile		Ile		Phe 140	His	туг	Tyr	Gln
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Ala	Thr	Val	Ser	11e 165	Cys	Lys	Lys	-	Ile 170	-		Lys		Ala 175	Arg
Thr	His		Cys 180	Ser	Ile	_	Asn	-	_			Lys		-	His
	_	Pro 195	_	Leu	Asn	Asn	Cys 200		-		Tyr		His	Arg	Tyr
	Phe 210	Ser	Ph <b>e</b>	Cys 		Phe 215	Met		Leu	_	Cys 220		Tyr	Cys	Ser
Tyr 225	-		_	_			Arg					Ala		Glu	Lys 240

Met	Lys	Gln	Leu	Asp 245	Lys	Asn	Lys	Leu	Gln 250	Ala	Val	Ala	Asn	Gln 255	Thr
Tyr	His	Gln	Thr 260	Pro	Pro	Pro	Thr	Phe 265	Ser	Phe	Arg	Glu	Arg 270	Met	Thr
His	Lys	Ser 275	Leu	Val	Tyr	Leu	Trp 280	Phe	Leu	Cys	Ser	Ser 285	Val	Ala	Leu
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Gln	Ala	Lys	Gly	Arg 325	Val	Phe	Arg	Asn	Pro 330	Tyr	Asn	Tyr	Gly	Cys 335	Leu
Asp	Asn	Trp	Lys 340	Val	Phe	Leu	Gly	Val 345	Asp	Thr	Gly	Arg	His 350	Trp	Leu
Thr	Arg	Val 355	Leu	Leu	Pro	Ser	Ser 360	His	Leu	Pro	His	Gly 365	Asn	Gly	Met
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Ala 385	Val														
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Glu	Lys	Ile	Leu 20	Glu	Lys	Leu	Leu	Thr 25	Arg	Phe	Pro	Gln	Cys 30	Asn	Lys
Ala	Gln	Met 35	Thr	Asn	Ile	Leu	Gln 40	Gln	Ile	Lys	Thr	Ala 45	Arg	Thr	Thr

Met Ala Gly Leu Thr Met Glu Glu Leu Ile Gln Leu Val Ala Ala Arg

60

55

Leu 65	Ala	Glu	His	Glu	Arg 70	Val	Ala	Ala	Ser	Thr 75	Gln	Pro	Leu	Gly	Arg 80
Ile	Arg	Ala	Leu	Phe 85	Pro	Ala	Pro	Leu	Ala 90	Gln	Ile	Ser	Thr	Pro 95	Met
Phe	Leu	Pro	Ser 100	Ala -	Gln	Val	Ser	Туг 105		Gly	Arg	Ser	Ser 110		Ala
Pro	Ala	Thr 115	Cys	Lys	Leu	Cys	Leu 120		Cys	Gln	Lys	Leu 125	Val	Gln	Pro
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Ile 145	Lys	Phe	Trp	Ala	Gln 150	Thr	Asn	Thr	Asn	Asp 155	Thr	Cys	Pro	Phe	Cys 160
Pro	Thr	Leu	Lys												
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		3							-			. :			
Val	Leu	Gln	Thr 20	Thr	Lys	Gly	Leu	Arg 25	Leu	Leu	Phe	Asp	Gly 30	Asp	Ala
His	Leu	Leu 35	Met	Ser	Ile	Pro	Ser 40	Pro	Phe	Arg	Gly	Arg 45	Leu	Cys	Gly
Leu	- Cys 50	Gly	Asn	Phe .	Asn (	Gly 55	Asn	Trp	Ser	Asp	Asp 60	Phe	Val	Leu	Pro

Asn 65	Gly	Ser	Ala	Ala	Ser 70	Ser	Val	Glu	Thr	Phe 75	Gly	Ala	Ala	Trp	Arg 80
Xaa	Pro	Gly	Ser	Ser 85	Lys	Gly	Cys	Gly	Glu 90	Gly	Cys	Gly	Pro	Gln 95	Gly
Суѕ	Pro	Val	Cys 100	Leu	Ala	Glu	Glu	Thr 105	Ala	Pro	туг	Glu	Ser 110	Asn	Glu
Ala	Cys	Gly 115	Gln	Leu	Arg	Asn	Pro 120	Gln	Gly	Pro	Phe	Ala 125	Thr	Cys	Gln
Ala	Val 130	Leu	Ser	Pro	Ser	Glu 135	Tyr	Phe	Arg	Gln	Cys 140	Val	Tyr	Asp	Leu
Cys 145	Ala	Gln	ГÀг	Gly	Asp 150	Lys	Ala	Phe	Leu	Cys 155	Arg	Ser	Leu	Ala	Ala 160
Tyr	Thr	Ala	Ala	Cys 165	Gln	Ala	Ala	Gly	Val 170	Ala	Val	Lys	Pro	Trp 175	Arg
Thr	Asp	Ser	Phe 180	Cys	Pro	Leu	His	Cys 185	Pro	Ala	His	Ser	His 190	Tyr	Ser
Ile	Cys	Thr 195	Arg	Thr	Суѕ	Gln	Gly 200	Ser	Cys	Ala	Ala	Leu 205	Ser	Gly	Leu
Thr	Gly 210	Суѕ	Thr	Thr	Arg	Cys 215	Phe	Glu	Gly	Cys	Glu 220	Cys	Asp	Asp	Arg
225					230		-			235	Gln				240
				245					250		Ser			255	
	_		260		·		_	265			Ser		270		-
		275	-				280				Glu	285			
	290					295					Val 300				
305					310		•		-	315	Ala				320
Gly	Val	Tyr	Glu	Leu 325	Ser	Ser	Arg	Cys	Pro 330	Gly	Leu	Gln	Asn	Thr 335	Ile

Pro	Trp	Tyr	Arg 340		Val	Ala	Glu	Val 345		Ile		His	Gly 35 <b>0</b>		Thr
Glu	Ala	Val 355	Gly	Gln	Val	His	11e 360	Phe	Phe			Gly 365	Met	Val	Thr
Leu	Thr 370	Pro	Asn				Trp							Asp	Leu
Pro. 385.		Glu	Lys	Leu	Ala 390	Ser	Val	Ser	Val	Ser 395	Arg	Thr	Pro	Asp	Gly 400
Ser	Leu	Leu	Val	Arg	Gln-	Lys.	Ala	Gly.	Val 410	Gln.	yal	Trp	Leu	Gly 415	
Asn	Gly	Lys	420				Val	425		_			430	_	
Cys		Ala 435				Phe	Asp 440								
Asp	-						Met						Gln	_	Phe
Ser 465	Pro	Cys	Tyr	Gly											
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<212 <213			apie	ns									-	-	
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<220															
<221			₹.									-			
<222	-	-	1 -					1 1				•			
~223	- Xa	ia ec	•	any	OI	tne	natu	rall	у ос	curr	ing	L-am	11110	acıc	15
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<221		TE													
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GLY 1	Pro	Arg	Ala	Leu 5	Trp	Pro	Pro	Pro	Glu 10	Val	Gly	Trp	Gly	Cys 15	Ser
Pro	Asn	Pro					Pro							Leu	Arg

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Trp Gly Thr Asn Asn Lys Glu Leu Thr Leu Pro Ala Pro Asn Pro Pro
        35
                           40
Pro Ala Pro Pro Cys Pro Pro Arg Phe Trp Phe His Phe Ser Ser Val
His Lys Leu Pro Leu Asp Ser Cys Val Val Phe Cys Ser Met Phe His
               70
Ser Ser Thr Ser Val Ile Ala Ala Ala Thr Ser Ala Lys Cys Ser Ser
Ser Leu Pro Pro Val Leu Pro Thr Ile Pro Ser Pro Lys Ile Leu Phe
          100
                              105
Val Gly Lys Arg Gly Trp Gly Met Ala Gly Trp Val Thr Asp Tyr Pro
Ser Pro Arg Glu Gly Gly Ala Leu Pro Leu Gly Cys Cys Ser Arg Val
                      135
Ser Lys Gly Ala Arg Ile Asp His Lys Gly Cys Arg Gly His Leu Leu
                                   155
Pro Leu Phe Cys Trp Gly Gly Val Ala Met Ile Cys Pro Ser Leu Gly
                                 170
Leu Pro Leu Trp Phe Pro Ile Cys Ser Tyr Leu Asn Lys Lys Asn Ile
           180
Lys Lys Lys Lys Lys Lys Xaa Xaa Gly Gly Ala Pro Pro Pro
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Thr Gln Ser Lys Trp Arg Leu Glu Val Gln Cys Gly Lys Glu Lys Gln
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Val Phe Ile Glu Ser Thr Asn Ser Thr Pro Phe Lys Asn Phe Xaa Gly

25 Thr Gln Pro Lys Gly 35 <210> 1282 <211> 458 <212> PRT <213> Homo sapiens <221> SITE <222> (249) <223> Xaa equals any of the naturally occurring L-amino acids Gly Pro Gln Arg Leu Ser Pro Gly Ala Met Leu Pro Ala Ala Thr Ala 5 Ser Leu Leu Gly Pro Leu Leu Thr Ala Cys Ala Leu Leu Pro Phe Ala 25 Gln Gly Gln Thr Pro Asn Tyr Thr Arg Pro Val Phe Leu Cys Gly Gly 35 40 45 Asp Val Lys Gly Glu Ser Gly Tyr Val Ala Ser Glu Gly Phe Pro Asn 55 Leu Tyr Pro Pro Asn Lys Glu Cys Ile Trp Thr Ile Thr Val Pro Glu Gly Gln Thr Val Ser Leu Ser Phe Arg Val Phe Asp Leu Glu Leu His 85 90 95 Pro Ala Cys Arg Tyr Asp Ala Leu Glu Val Phe Ala Gly Ser Gly Thr 100 105 Ser Gly Gln Arg Leu Gly Arg Phe Cys Gly Thr Phe Arg Pro Ala Pro 115 120 125 Leu Val Ala Pro Gly Asn Gln Val Thr Leu Arg Met Thr Thr Asp Glu Gly Thr Gly Gly Arg Gly Phe Leu Leu Trp Tyr Ser Gly Arg Ala Thr 145 150 155 160 Ser Gly Thr Glu His Gln Phe Cys Gly Gly Arg Leu Glu Lys Ala Gln

				165					170					175	
Gly	Thr	Leu	Thr 180	Thr	Pro	Asn	Trp	Pro 185	Glu	Ser	Asp	туг	Pro 190		Gly
Ile	Ser	Cys 195	Ser	Trp	His	Ile	Ile 200	Ala	Pro	Pro	Asp	Gln 205	Val	Ile	Ala
Leu	Thr 210	Phe	Glu	Lys	Phe	Asp 215	Leu	Glu	Pro	Asp	Thr 22 <b>0</b>	Tyr	Cys	Arg	туг
Asp 225	Ser	Val	Ser	Val	Phe 230	Asn	Gly	Ala	Val	Ser 235	Asp	Asp	Ser	Arg	Arg 240
		-		245	Gly	•			250			·		255	
			260		Val			265					270		
_	·	275			Ser	-	280					285			-
	290				Gly	295					300				
305					Gln 310				-	315					320
				325	Thr				330					335	:
			340		Cys			345					350		
		355			Glu		360		-			365			
	370				Lys	375					380				
385	_				199 390					395					400
				405	Ser				410					415	
			420		Pro			425					430		
nsn	GIII	νsh	GIN	116	Leu	TILL	ASII	neu	Ser	Lys	ur A	гλг	-ys	-10	Ser

		43	5				44	D				44	5		
Glr	450		l Ar	g Ala	a Ala	a Ala 45!		r Gli	n As	Þ			-		
	.0> 1														
<21		RT.	sapi					٠.:		7	. 5	<b>,</b> h			
		.00	2apı	.ens	•										
	:0> :1> s	ITE				. ,	• .	٠.				<i>:</i>		2 . 2	:
	2> (								•					-	
<22	3> x	aa e	qual	s an	y of	the	nat	ural	ly c	ccur	ring	L-a	mino	aci	ds
<22 <22	_	ITE.											. · .		
		154)													-
<22	3> x	aa e	qual	s an	y of	the	nat	ural	ly c	ccur	ring	L-a	mino	aci	.ds
					-	`				-					
<22															
	1> S														
		155)			-				•					-	
<22	3> X	aa e	qual	s.an	y of	the	nat	ural	ly o	ccur	ring	L-a	mino	aci	ds
<40	0 > 1·	283				٠.							<u>-</u> .		•
			Pro	Leu											
1				5			1		10			• • • •	**** 9	15	
			_	·· .				:				· ·		.:	•
Glu	Pro	Pro	Phe 20	Pro	Leu	Gly	Val	Thr 25	Arg	Gly	Trp	Gly	Arg 30	Trp	Pro
Ile	Gln	Lys 35	Arg	Arg	Glu	Gly	Ala 40	Arg	Pro	Val	Pro	Xaa 45		Glu	Arg
							•					43			
Ser	Gln 50		Asp												
							**			•	:		· :		
65			Arg		70		Ser			Arg 75		Pro	Glu	Pro	Pro 80
	 						•••	-		_	_		_	_	
PTO	Pro	ren	Cys	Leu 85	Leu	Arg	val	Ser	Leu 90	Leu	Cys	Ala	Leu	Arg 95	
Gly	Gly	Arg	Gly 100	Ser	Arg	Trp	Gly	Glu 105	Asp	Gly	Ala	Arg	Leu 110	Leu	Leu
Leu	Pro		Ala												

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Gly Pro Ser Tyr Ala Gly Arg Met Leu Glu Ser Ser Gly Cys Lys Ala
                        135
Leu Lys Glu Gly Val Leu Glu Lys Arg Xaa Xaa Gly Cys Cys Ser Ser
                    150
Gly Arg Lys Ser Val Ala Ser Ser Pro Arg Lys Gly Cys Cys Leu Ser
               165
Arg Pro Ser Ser Cys Asn Thr Ser Ser Ser Ser Asn Ser Ser Ser Ser
                               185
Ser Ser Asn Asn Ser Pro Gly Arg Gly Arg Pro Ser Arg Pro Asn Pro
      195
                            200
Val Ala Pro Leu Ser Pro Ala Ser Ser Arg Arg Ser Ser Ser Arg Asn
                        215
                                            220
Cys Thr Ser Pro Thr
225
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Thr Ala Ala Ser Ala Ala Arg Phe Lys Met Ala Ala Cys Ser His Ser
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Phe Ser Ala Glu Arg Leu Leu Thr Phe Ile Val Phe Ser Ala Arg Phe
Asp Arg Leu Xaa Pro Ala Ala Leu Ser Gly Ile Phe Tyr Gln Ala Glu
     50
Met His Arg Thr Thr Arg Ile Lys Ile Thr Glu Leu Asn Pro His Leu
Met Cys Val Leu Cys Gly Gly Tyr Phe Ile Asp Ala Thr Thr Ile Ile
```

				85	•				9 (	)				95	<b>i</b>
Glu	Cys	Leu	His 100	Ser	Phe	Cys				s Ile		Arg			Glu
Thr	Ser		Tyr		Pro	Ile		Asp			Val	. His		Thr	Arc
Pro	Leu 130		Asn		Arg					Leu			Ile	Val	туг
Lys 145		Val	Pro	Gly	Leu 150										Asp 160
Phe	Tyr	Ala			Pro										
Asp	Arg	Gly	Glu 180		Ala	Asp		Asp 185		Arg	Ile	Ile	Thr 190		Asp
Glu 		Ile 195			Ser	Ile						Asn 205		Leu	
	Lys 210	Val	Asn	Lys	Asp					Lys			Val	Asn	Asp
Lys 225		Tyr			Cys 230			Ala	Met	Thr 235		Met	His	Leu	Arg 240
				245	Lys				250					255	
Val	Met	Tyr	Glu 260	Glu	Glu	Pro	Leu	Lys 265		Tyr	Tyr	Thr	Leu 270	Met	Asp
Ile	Ala	Tyr 275	Ile	Tyr	Thr	Trp	Arg 280	Arg	Asn	Gly	Pro	Leu 285	Pro	Leu	Lys
	290					295					300		-,		
Asp 305	Gly	Leu	Thr	Asn :	Ala 310	Gly	Glu	Leu	Glu	315	Asp	Ser	Gly	Ser	Asp 320
				325	Ala				330					335	
			340		Pro	Val -	Gln	Ser 345	Pro	His	Pro	Gln	Phe 350	Pro	His
Tla	C ~ ~		mb-	1404	A	C1	m b	C			D	C	C7.44		

```
355
                           360
                                                 365
Gln Ser Ser Phe Ala Asn Arg Pro Arg Lys Ser Ser Val Asn Gly Ser
    370
                        375
                                            380
Ser Ala Thr Ser Ser Gly
385
                     390
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His Ala Ser Ala Gly Ser Gln Leu Phe Glu Met His Glu Lys Leu Ser
Cys Met Ala Asn Ser Val Ile Lys Asn Leu Gln Ser Arg Trp Arg Ser
             20
                                  25
Pro Ser His Glu Asn Ser Ile
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Gly	Leu	Pro		Ser			Gln				Pro		Ala - 30		Pro
Gln			Pro		Xaa	Pro	His 40	Arg	Glu	Glu	Thr	Val 45		Ala	Thi
Ala		Ser						Pro			Ala 60			Pro	Gly
Glu : 65		Ala			_		Ala				Ser			Val	
Ala											Trp				
Ser	Arg	Arg	Arg 100	Xaa	Lys	Val	Ala	Ala 105	Ala	Ala	Gln	Ala	Xaa 110	Lys	Glu
		Glu 115		_					_	-	Ile				G1u
Thr	Lys 130		Val	Gly		Ser 135		Asp	Gly	Arg	Phe 140	Leu	Lys	Phe -	
Ile 145	Glu	Ile	Gly	Arg							туг			Leu	
Thr	Glu	Thr	Thr		Glu		Ala	-	Cys 170		Leu		_	Arg 175	_
Leu	Thr		Ser 180	Glu	Arg	Gln	Arg		Lys		Glu		Glu 190	Met	Leu
		Leu 195					Ile 200				Tyr	Asp 205		-	Glu
Ser	Thr 210	Val	Lys	_	_	_	_				Val 220		Glu		Met
	Ser		Thr				Tyr -				Phe			Met	
Ile	Lys	Val		Arg 245	Ser	Trp	Суз		Gln 250		Leu	Lys	_	Leu 255	
Phe	Len	His	Thr	Ara	The	Pro	Pro	Tle	Tle	His	Arg	Asp	Leu	Lve	Cve

1319

265 270 260 Asp Asn Ile Phe Ile Thr Gly Pro Thr Gly Ser Val Lys Xaa Gly Asp 280 275 Leu Gly Leu Ala Thr Leu Lys Arg Ala Ser Phe Ala Lys Ser Val Ile 295 290 Gly Thr Pro Glu Phe Met Ala Pro Glu Met Tyr Glu Glu Lys Tyr Asp 310 315 Glu Ser Val Asp Val Tyr Ala Phe Gly Met Cys Met Leu Glu Met Ala 325 Thr Ser Glu Tyr Pro Tyr Ser Glu Cys Gln Asn Ala Ala Gln Ile Tyr 345 Arg Arg Val Thr Ser Gly Val Lys Pro Ala Ser Phe Asp Lys Val Ala 360 365 Ile Pro Glu Val Lys Glu Ile Ile Glu Gly Cys Ile Arg Gln Asn Lys 375 Asp Glu Arg Tyr Ser Ile Lys Asp Leu Leu Asn His Ala Phe Phe Gln 390 395 Glu Glu Thr Gly Val Arg Val Glu Leu Ala Glu Glu Asp Asp Gly Glu 410 405 Lys Ile Ala Ile Lys Leu Trp Leu Arg Ile Glu Asp Ile Lys Lys Leu 425 Lys Gly Lys Tyr Lys Asp Lys Lys Lys Lys Lys Lys Lys Lys Lys 440 435 Asn Thr His Arg Ala 450 <210> 1287 <211> 450 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (33) <223> Xaa equals any of the naturally occurring L-amino acids <220>

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Ala Ala Glu Val Leu Cys Pro Ser Cys Phe Pro Ile Ser Pro Ala Pro
Trp Met Thr Val Gly Pro Ala Ser Ala Leu Phe Pro Cys Gln Thr Pro
Xaa Phe Pro Trp Thr Glu Trp Asn Xaa Trp Xaa Phe Thr Ala His Val
         35
                             40
                                                 45
Leu Ser Gln Lys Phe Glu Lys Glu Leu Ser Lys Val Arg Glu Tyr Val
Gln Leu Ile Ser Val Tyr Glu Lys Lys Leu Leu Asn Leu Thr Val Arg
                     70
                                         75
```

Ile Asp Ile Met Glu Lys Asp Thr Ile Ser Tyr Thr Glu Leu Asp Phe

				85					90					95	
Glu	Leu	Ile	Lys 100	Val	Glu	Val	Lys	Glu 105	Met	Glu	Lys	Leu	Val 110	Ile	Gln
Leu	Lys	Glu 115	Xaa	Phe	Gly	Gly	Ser 120	ser	Glu	Ile	Val	Asp 125	Gln	Leu	Glu
Val	Glu 130	Ile	Arg	Aşn	Met	Thr 135	Leu	Leu	Val	Glu	Lys 140	Leu	Glu	Thr	Leu
Asp 145	Lys	Asn	Asn	Val	Leu 150	Ala	Ile	Arg	Arg	Glu 155	Ile	Val	Ala	Leu	Lys 160
Thr	Lys	Leu	Lys	Glu 165	Cys	Glu	Ala	Ser	Lys 170	Asp	Gln	Asn	Thr	Pro 175	Val
Val	His	Pro	Pro 180	Pro	Thr	Pro	Gly	Ser 185	Суѕ	Gly	His	Gly	Gly 190	Val	Val
Xaa	Ile	Ser 195	Lys	Pro	Ser	Val	Val 200	Gln	Leu	Asn	Trp	Arg 205	Gly	Phe	Ser
	210				Trp	215					220				
225					Val 230					235					240
				245	Tyr				250					255	
			260		Arg			265					270		
		275			Met		280					285			
	290				Thr	295					300				
305					Asn 310					315					320
				325					330					335	
			340		Thr			345					350		
Thr	Thr	Leu	Gln	Val	Leu	Asn	Thr	Trp	Tyr	Thr	Lys	Gln	Tyr	Lys	Pro

		355					360					365			
Ser	Ala 370		Asn	Ala	Phe	Met 375		Cys	Gly	Val	Leu 380		Ala	Thr	Arg
Thr 385	Met	Asn	Thr	Arg	Thr 390	Glu	Glu	Ile	Phe	Tyr 395		туr	Asp	Thr	Asn 400
Thr	Gly	Lyš	Glu	Gly 405	Lys	Leu	Asp	Ile	Val 410		His	Lys	Met	Gln 415	Glu
ГÀа	Val	Gln	Ser 420	Ìle	Asñ	Tyr	Asn	Pro 425		Asp	Gln	Lys	Leu 430	_	Vali
Tyr	Àsń	Asp 435	Glý	Tyr	Leu	Leu	Asn 440	_	Asp	Leu	Ser	Val 445	Leu	Gln	Lys
Prö	G1n 450	•					- '	3		3.7				٠.	-
		•				-			- 12				-	*	
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<211	3> H	omo s	sanie	205											
		omo s	sapie	ens				-							
<400	)> 12 Gln	288 Gln	_	Leu	Pro	Asn	Asn	Gly	Leu 10	Leu .	Phe	Thr	Trp	Thr 15	Leu
<400 Leu 1	)> 12 Gln	288 Gln	Ala	Leu 5	.`				10	Leu	Val		Phe	15	
<400 Leu 1 Ser	)> 12 Gln Lys	288 Gln Glu	Ala Gly 20	Leu 5 Gly Gly	Arg	Glu Arg	Gly	Gln 25	10 Ser		Val	Ser	Phe 30	15 Gln	His
<400 Leu 1 Ser Ser	O> 12 Gln Lys Ser	288 Gln Glu Glu Gln 35	Ala Gly 20 Lys	Leu 5 Gly Gly	Arg Glu	Glu Arg	Gly Phe 40	Gln 25 Ser	Ser Gly	Gly	Val Cys	Ser His 45	Phe 30 Ala	15 Gln Ile	His Gly
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<400 Leu 1 Ser Ser Ile	Cln  Lys  Ser  Lys  50	Glu Gln 35 Gln	Ala Gly 20 Lys Glu Trp	Leu 5 Gly Gly Ala Leu	Arg Glu His	Glu Arg Gly 55 Thr	Gly Phe 40 Trp	Gln 25 Ser Leu	Ser Gly Leu Cys	Gly Trp Asn	Val Cys Glu 60	Ser His 45 Glu	Phe 30 Ala Gln	Gln Ile Asn	His Gly Leu Thr 80
<400 Leu 1 Ser Ser Ile Gly 65 Ser	O> 12 Gln Lys Ser Lys 50 Ala	288 Gln Glu Gln 35 Gln Leu	Ala Gly 20 Lys Glu Trp	Leu 5 Gly Gly Ala Leu Gln 85	Arg Glu His Thr 70	Glu Arg Gly 55 Thr	Gly Phe 40 Trp Ala	Gln 25 Ser Leu Ile	Ser Gly Leu Cys Ser 90	Gly Trp Asn Gly 75	Val Cys Glu 60 Ala	Ser His 45 Glu Gly Asp	Phe 30 Ala Gln Thr	Gln Ile Asn His	His Gly Leu Thr 80 Ser

```
Tyr Asp Thr Cys Gln Asp Ala Leu Pro Pro Pro Leu Lys Val Gly Pro
                        135
Gly Gln His Cys Ser Leu Leu Ser Ala Phe Ser Gly Leu Arg Ser Gln
145
                                 155
Tyr Glu Leu Pro
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Cys Leu Arg Val His Tyr Gln Gly Ile Ser Gly Thr Arg Xaa His Ser
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                                25
Leu His Gln Phe Leu Arg Val Leu
       35
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<212> PRT
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Asp Ile Met Glu Ser Gly Phe Thr Ser Lys Asp Thr Tyr Leu Ser His
                                   10
Phe Asn Pro Arg Asp Tyr Leu Glu Lys Tyr Tyr Lys Phe Gly Ser Arg
           20
                                25
```

His	Ser	Ala 35	Glu	Ser	Gln	Ile	Leu 40		His	Leu	Leu	Lys 45		Leu	Phe
Lys	Ile 50		Cys	Leu	Asp	Gly - 55	Val	Lys			Leu 60		Ile		Ile
Gly 65	Ser	Gly	Pro		11e - 70		Gln	Leu	Leu	Ser 75	Ala	Cys	Glu	Ser	Phe 80
Lys	Glu	Ile	Val	Val 85		Asp	Туг	Ser	Asp		Asn	Leu	Gln	Glu 95	
Glu	Lys	Trp	Leu 100		Lys	Glu	Pro	Glu 105		Phe	Asp	Trp	Ser 110		Val
Val	Thr	Tyr 115	Val	· Cys	Asp	Leu	Glu 120		Asn	Arg	Val	·Lys 125		Pro	Glu
Lys	G1ú 130	Glu	Lys	Leu	Arg	Gln 135	Ala	Val	Ĺys	Gln	Val- 140	Leu	Lys	Cys	Asp
Val- 145	Thr	Gln	Ser	Gln	Pro 150	Leu	Gly	Ala	Val-	Pro	Leu	Pro	Pro	Ala-	Asp 160
Cys	Val	Leu	Ser	Thr	Leu:	Cys	Leu	Asp	Ala 170	Ala	Сув	Pro	Asp	Leu 175	Pro
Thr	Tyr-	Cys	Arg:	Ala	Leu	Arg	Asn-	Leu 185	Gly	Ser	Leu <sup>·</sup>	Leu	Lys 190	Pro	Gly
Gly	Phe-	Leu 195	Vál	Ile-	Met	Asp	Ala 200	Leu	Lys	Ser	Ser	Tyr: 205	Туг	Met	Ile
Gly	Glu 210	Gln	Lys	Phe-	Ser	Ser 215	Leu	Pro	Leu	Gly	Arg 220	Glu	Ala	Val	Glu
Ala 225	Ala	Val	Lys	Glu	Ala 230	Gly	Tyr	Thr	Ile	Glu 235	Trp	Phe	Glu	Val	Ile 240
Ser	Gln	Ser	Tyr	Ser 245	Ser	Thr	Met	Ala	Asn 250	Asn	Glu	Gly	Leu	Phe 255	Ser
Leu	Val	Ala	Arg 260	Lys	Leu 	Ser	Arg	Pro 265	Leu						
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1325

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Leu Gly Glu Val Gly Asp Gln Gly Lys Ser Arg Gln Arg Ala Ser Lys
                                 25
Arg Leu Phe Ala Ser Lys Ala Leu Arg Gly His Leu Arg Pro Val Arg
                                                 45
Gly Gln Gln Pro Gly Arg Xaa Gly Ser Asp Glu Asn Glu Glu Ser Ser
Val Val Asp Tyr Val Glu Val Thr Val Gly Glu Glu Asp Ala Ile Ser
Asp Arg Ser Asp Ser Trp Ser Gln Ala Ala Ala Glu Gly Val Ser Glu
                 85
Leu Ala Glu Ser Asp Ser Asp Cys Val Pro Ala Glu Ala Gly Gln Ala
                               105
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55

<210> 1292

Met 65		Pro	His	Leu	Glu 70	Ser	Gly	Met	Lys	Ser 75		Lys	Ser	Lys	Asp 80
Val	Leu	Ser	Ala	Ala 85	Glu	Val	Met	Gln	Trp 90		Gln	Ser	Leu	Glu 95	
Leu	Leu	Ala	Asn 100	Gln	Thr	Gly	Gln	Asn 105		Phe	Gly	ser	Phe	Leu	Lys
Ser	Glu	Phe 115	Ser	Glu	Glu	Asn	Ile 120			Trp		Ala 125		Glu	Asp
Tyr	Lys 130		Thr	Glu	Ser	Asp 135	Leu	Leu	Pro	Cys	Lys 140	Ala	Glu		
Туг 145		Ala	Phe	Val	His 150	Ser		Ala		Lys 155	Gln	Ile	Asn	Ile	
Phe	Arg	Thr	Arg	Glu 165	Ser					Ile			Pro		
Thr	Cys	Phe	Asp 180	Glu	Ala		Lys	Val 185		Tyr		Leu	Met 190		Lys
Asp	Ser	туг 195	Pro	Arg			Lys 200	Ser	Asp	Ile	Tyr	Leu 205	Asn	Leu	Leu
Asn	Asp 210	Leu	Gln	Ala	Asn	Ser 215	Leu	Lys	-		_				
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<213	8> Hc	omo s	sapie	ens ·				-					•		
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	?> (2 }> Xa		quals	any	of	the	natu	ırall	ly oc	curi	ing	L-ar	nino	acio	is
<400	> 12	93													
Leu 1	His	Leu	Leu	Ala 5	Val	Leu	Glu	Lys	Met 10	Ile	Ser	Gln	Gly	Asn 15	Asn
Asn	Lys	Asn	Gly 20	Lys	Asn	Glu	Thr	Gly 25	Asn	Asn	Asn	Asn	Lys 30	Asp	Gly
Ser	Asn	His 35	Lys	Ala	Glu	Ser	Gly 40	Ala	Leu	Ile	Glu	Ala 45	Ala	Lys	Ser

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Lys Ile His Gln Tyr Lys Val Arg Ala Tyr Ile Gln Met Lys Ser Leu .
                        55
Lys Ala Cys Lys Arg Glu Ile Lys Ser Val Met Asn Thr Ala Gly Asn
Ser Ala Pro Ser Leu Phe Leu Lys Ser Asn Phe Glu Tyr Leu Arg Gly
                                     90
Asn Tyr Arg Lys Ala Val Lys Leu Leu Asn Ser Ser Asn Ile Ala Glu
His Pro Gly Phe Met Lys Thr Gly Glu Cys Leu Arg Cys Met Phe Trp
                            120
        115
Asn Asn Leu Gly Cys Ile His Phe Ala Met Ser Lys His Asn Leu Gly
Ile Phe Tyr Phe Lys Lys Ala Leu Gln Glu Asn Asp Asn Val Cys Ala
                  150
Gln Leu Ser Ala Gly Ser Thr Asp Pro Gly Lys Lys Phe Ser Gly Arg
                                   170
                165
Pro Met Cys Thr Leu Leu Thr Asn Lys Arg Tyr Glu Leu Leu Tyr Asn
                               185
Cys Gly Ile Gln Leu Leu His Ile Gly Arg Pro Leu Ala Ala Phe Glu
                            200
        195
Cys Leu Ile Glu Ala Val Gln Val Tyr His Ala Asn Pro Arg Leu Trp
                        215
Leu Arg Leu Ala Xaa Met Leu His Cys Cys Gln
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Ala	Arg	Gly	Ala	Arg	Gly	Arg	Ala	Leu	Pro	Ala	Ser	Gly	Lys	Ala	Gly
1	-		-	5					10	)		-	•	15	
Arg	Ala	Arg	Gly 20	Ser	Ala	Xaa	Gly	Ser 25	Ala	Ala	Arg	Gly	His	Trp	Ser
•															
ren	Ala	Arg 35			Ala		Arg 40		Ser	His		Pro 45		Arg	Arg
V	V	<b>63.</b>			a	<b>m</b> >		-1-			_		_	_	
	50			vai	ser	55				Arg	· 60		ser		-
D==	T	n 1 -	T	C		<b>21</b>	<b>~</b>	•	<b></b>		- 1		_	_	_
65			Leu		70-		ser			75			ser		Reu 80
Thr	Pro	Gln	Pro	Gln 85	Val	Gly	Leu		His 90	Ile	Met	Thr	Ser	Phe 95	
Asp	Ala	_	Thr 100			Thr		Thr 105	_	Leu :		Met	Thr 110	Val	Tyr
His	Pro	Gly 115		Leu	Gln		Gly 120			Gln		Ile 125		Phe	Asn
Arg	Glu 130				Ser		Glu	Val	Val	Lys	Phe 140	_	Arg	Asn	Ser
Asn 145	Ile	Cys	His		Thr 150		Gln	Asp	Lys	Gln 155	Val	Ser	Arg	Val	Gln 160
Phe	Ser	Leu	Gln	Leu 165	Phe	Lys	Lys	Phe	Asn 170	Ser	Ser	Val	Leu	Ser 175	Phe
Glu	Ile	Lys	Asn 180	Met	Ser	Lys	Lys	Thr 185	Asn	Leu	Ile	Val	Asp 190	Ser	Arg
Glu	Leu	Gly 195	Tyr	Leu	Asn	Lys	Met 200	Asp	Leu	Pro	Tyr	Arg 205	Cys	Met	Val
	Phe		Glu			Phe		Met	Glu	Lys	Glu		Gly	Glu	Ser

1329

Leu Glu Phe Phe Glu Thr Gln Phe Ile Leu Ser Pro Arg Ser Leu Leu

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225
Gln Glu Asn Asn Trp Pro Pro His Arg Pro Ile Pro Glu Tyr Gly Thr
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Tyr Ser Leu Cys Ser Ser Gln Ser Ser Ser Pro Thr Glu Met Asp Glu
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Asn Glu Ser
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Val Ser Pro Val Val Gln Asn Ile Thr Ser Pro Asp Glu Asp Gly Ile
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Ser Pro Leu Gly Trp Leu Leu Asp Gln Tyr Leu Glu Cys Gln Glu Ala
Val Phe Asn Pro Gln Ser Arg Gly Pro Ala Phe Phe Ser Arg Val Arg
Arg Leu Thr His Leu Leu Val His Val Glu Pro Cys Glu Ala Pro Pro
                                         75
                     70
Pro Val Val Ala Thr Pro Arg Pro Lys Gly Arg Asn Arg Ser His Asp
Trp Ser Ser Leu Ala Thr Arg Gly Leu Pro Ser Ser Ile Met Arg Asn
                                105
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Leu	Thr	Arg 115	Cys	Trp	Arg	Ala	Val 120		Glu	Lys	Gln	Val 125		Asn	Phe
Leu	Thr 130	Ser	Ser	Trp	Arg	Asp 135	Asp	Asp	Phe	Val	Pro 140	Arg	Tyr	Cys	Xaa
His 145	Phe	Asn	Ile	Leu	Gln 150	Asn	Ser	Ser	Ser	Glu 155	Leu	Phe	Gly	Pro	Arg 160
хаа	Ala	Phe	Leu	Leu 165	Ala	Leu	Gln	Asn	Gly 170	-	Ala	Gly	Ala	Leu 175	
Lys	Leu	Pro	Phe 180	Leu	Lys	Ala	Ala	His 185	Val	Ser	Glu	Gln	Phe 190	Ala	Arg
His	Ile	Asp 195	Gln	Gln	Ile	Gln	Gly 200	Ser	Arg	Ile	Gly	Gly 2 <b>0</b> 5	Ala	Gln	Glu
Met	Glu 210	Arg	Leu	Ala	Gln	Leu 215	Gln	Gln	Cys	Leu	Gln 220	Ala	Val	Leu	Ile
Phe 225	Ser	Gly	Leu	Glu	11e 230	Ala	Thr	Thr	Phe	Glu 235	His	Tyr	Tyr	Gln	His 240
Tyr	Met	Ala	Asp	Arg 245	Leu	Leu	Gly	Val	Val 250	Ser	Ser	Trp	Leu	Glu 255	Gly
Ala	Val	Leu	Glu 260	Gln	Ile	Gly	Pro	Cys 265	Phe	Pro	Asn	Arg	Leu 270	Pro	Gln
Gln	Met	Leu 275	Gln	Ser	Leu	Ser	Thr 280	Ser	Lys	Glu	Leu	Gln 285	Arg	Gln	Phe
His	Val 290	Tyr	Gln	Leu	Gln	Gln 295	Leu	Asp	Gln	Glu	Leu 300	Leu	Lys	Leu	Glu
Asp 305	Thr	Glu	Lys	Lys	11e 310	Gln	Val	Gly	Leu	Gly 315	Ala	Ser	Gly	Lys	Glu 320
His	Lys	Ser	Glu	Lys 325	Glu	Glu	Glu	Ala	Gly 330	Ala	Ala	Ala	Val	Val 335	Asp
Val	Ala	Glu	Gly 340	Glu	Glu	Glu	Glu	Glu 345	Glu	Asn	Glu	Asp	Leu 350	Tyr	Tyr
		355					Ser 360					365			
	Pro 370						His						Thr	Cys	Leu

Pro 385	Ser	Tyr	Leu	Arg	Gly 390	Thr	Leu	Asn	Arg	Tyr 395	Ser	Asn	Phe	Tyr	400
Lys	Ser	Gln	Ser	His 405	Pro	Ala	Leu	Glu	Arg 410	Gly	Ser	Gln	Arg	Arg 415	Leu
Gln	Trp	Thr	Trp 420	Leu	Gly	Trp	Ala	Glu 425	Leu	Gln	Phe	Gly	Asn 430	Gln	Thr
Leu	His	Val 435	Ser	Thr	Val	Gln	Met 440	Trp	Leu	Leu	Leu	Tyr 445	Leu	Asn	Asp
Leu	Lys 450	Ala	Val	Ser	Val	Glu 455	Ser	Leu	Leu	Ala	Phe 460	Ser	Gly	Leu	Ser
Ala 465	Asp	Met	Leu	Asn	Gln 470	Ala	Ile	Gly	Pro	Leu 475	Thr	Ser	Ser	Arg	Gly 480
Pro	Leu	Asp	Leu	His 485	Glu	Gln	Lys	Asp	Ile 490	Pro	Gly	Gly	Val	Leu 495	Lys
Ile	Arg	Asp	Gly 500	Ser	Lys	Glu	Pro	Arg 505	Ser	Arg	Trp	Asp	Ile 510	Val	Arg
Leu	Ile	Pro 515	Pro	Gln	Thr	туr	Leu 520	Gln	Ala	Glu	Gly	Glu 525	Asp	Gly	Gln
Asn	Leu 530	Glu	Lys	Arg	Arg	Asn 535	Leu	Leu	Asn	Суз	Leu 540	Ile	Val	Arg	Ile
Leu 545	Lys	Ala	His	Gly	Asp 550	Glu	Gly	Leu	His	Ile 555	Asp	Gln	Leu	Val	Cys 560
Leu	Val	Leu	Glu	Ala 565	Trp	Gln	Lys	Gly	Pro 570	Cys	Pro	Pro	Arg	Gly 575	Leu
Val	Ser	Ser	Leu 580	Gly	Lys	Gly	Ser	Ala 585	Cys	Ser	Ser	Thr	Asp 590	Val	Leu
Ser	Суз	Ile 595	Leu	His	Leu	Leu	Gly 600	Lys	Gly	Thr	Leu	Arg 605	Arg	His	Asp
Asp	Arg 610		Gln	Val	Leu	Ser 615	Tyr	Ala	Val	Pro	Val 620	Thr	Val	Met	Glu
Pro 625		Thr	Glu	Ser	Leu 630	Asn	Pro	Gly	Ser	Ser 635	Gly	Pro	Asn	Pro	Pro 640
Leu	Thr	Phe	His	Thr 645		Gln	Ile	Arg	Ser 650		Gly	Val	Pro	Туг 655	Ala

Ser Cys Thr Ala Thr Gln Ser Phe Ser Thr Ser Gly Ser Pro Arg Leu 660 665 670

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Gly Thr Arg Glu Gly Ala Arg Val Gly Gly Ala Arg Gly Gly Arg Asp
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Gly Arg Lys Met Ala Thr Ala Thr Ile Ala Leu Gln Val Asn Gly Gln
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Gln Gly Gly Ser Glu Pro Ala Ala Ala Ala Ala Val Val Ala Ala 35 40 45

Gly Asp Lys Trp Lys Pro Pro Gln Gly Thr Asp Ser Ile Lys Met Glu 50 55 60

Asn Gly Gln Ser Thr Ala Ala Lys Leu Gly Leu Pro Pro Leu Thr.Pro 65 70 75 80

Glu Gln Gln Glu Ala Leu Gln Lys Ala Lys Lys Tyr Ala Met Glu Gln 85 90 95  $\dot{}$ 

Ser Ile Lys Ser Val Leu Val Lys Gln Thr Ile Ala His Gln Gln Gln 100 105 110

Gln Leu Thr Asn Leu Gln Met Ala Ala Val Thr Met Gly Phe Gly Asp 115 120 125

Pro Leu Ser Pro Leu Gln Ser Met Ala Ala Gln Arg Gln Arg Ala Leu 130 135 140

Ala Ile Met Cys Arg Val Tyr Val Gly Ser Ile Tyr Tyr Glu Leu Gly 145 150 155 160

Glu Asp Thr Ile Arg Gln Ala Phe Ala Pro Phe Gly Pro Ile Lys Ser 165 170 175

Ile Asp Met Ser Trp Asp Ser Val Thr Met Lys His Lys Gly Phe Ala 180 185 190

Phe Val Glu Tyr Glu Val Pro Glu Ala Ala Gln Leu Ala Leu Glu Gln

			195					200					205			
	Met	Asn 210	Ser	Val	Met	Leu	Gly 215	Gly	Arg	Asn	Ile	Lys 220	Val	Gly	Arg	Pro
	Ser 225	Asn	Ile	Gly	Gln	Ala 230	Gln	Pro	Ile	Ile	Asp 235	Gln	Leu	Ala	Glu	Glu 240
	Ala	Arg	Ala	Phe	Asn 245	Arg	Ile	туг	Val	Ala 250	Ser	Val	His	Gln	Asp 255	Leu
-	Ser	Asp	Asp	Asp 260	Ile	Lys	Ser	Val	Phe 265	Glu	Ala	Phe	Gly	Lys 270	Ile	Lys
	Ser	Cys	Thr 275	Leu	Ala	Arg	Asp	Pro 280	Thr	Thr	Gly	Lys	His 285	Lys	Gly	Tyr
	Gly	Phe 290	Ile	Glu	Tyr	Glu	Lys 295	Ala	Gln	Ser	Ser	Gln 300	Asp	Ala	Val	Ser
	Ser 305	Met	Asn	Leu	Phe	Asp 310	Leu	Gly	Gly	Gln	Туг 315	Leu	Arg	Val	Gly	Lys 320
	Ala	Val	Thr	Pro	Pro 325	Met	Pro	Leu	Leu	Thr 330	Pro	Ala	Thr	Pro	Gly 335	Gly
	Leu	Pro	Pro	Ala 340	Ala	Ala	Val	Ala	Ala 345	Ala	Ala	Ala	Thr	Ala 350	Lys	Ile
	Thr	Ala	Gln 355	Glu	Ala	Val	Ala	Gly 360	Ala	Ala	Val	Leu	Gly 365	Thr	Leu	Ģly
	Thr	Pro 370	Gly	Leu	Val	Ser	Pro 375	Ala	Leu	Thr	Leu	Ala 380	Gln	Pro	Leu	Gly
	Thr 385	Leu	Pro	Gln	Ala	Val 390		Ala	Ala	Gln	Ala 395	Pro	Gly	Val	Ile	Thr 400
	Gly	Val	Thr	Pro	Ala 405	Arg	Pro	Pro	Ile	Pro 410	Val	Thr	Ile	Pro	Ser 415	Val
	Gly	Val	Val	Asn 420		Ile	Leu	Ala	Ser 425		Pro	Thr	Leu	Gly 430	Leu	Leu
		Pro	435					440					445			
		Pro 450					455					460				
	Ser	Ala	Ara	His	Met	Val	Met	Gln	Lys	Leu	Leu	Arg	Lys	Gln	Glu	Ser

465	ı				470					475					480
Thr	Val	Met	. Val	Leu 485		Asn	Met	Val	Asp 490		Lys	Asp	Ile	Asp 495	Asp
Asp	Leu	Glu	Gly 500		Val	Thr	Glu	Glu 505		Gly	Lys	Phe	Gly 510		Val
Asn	Arg	Val 515		Ile	Туr	Gln	Glu 520		Gln	Gly	Glu	Glu 525	Glu	Asp	Ala
Glu	Ile 530		Val	Lys	Ile	Phe 535	Val	Glu	Phe	Ser	Ile 540	Ala	Ser	Glu	Thr
His 545	Ļys	Ala	Ile	Gln	Ala 550	Leu	Asn	Gly	Arg	Trp 555		Ala	Gly	Arg	Lys 560
Val	Val	Ala	Glu	Val 565	Tyr	Asp	Gln	Glu	Arg 570	Phe	Asp	Asn	Ser	Asp 575	Leu
Ser	Ala														
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Pro			Thr	ser	Arg	Arg	ser	Ala	Trp	Pro	Lys	Met	Ala	Ala	Ser
1				5					10					15	
Val	Cys	Ser	Gly 20	Leu	Leu	Gly	Pro	Arg 25	Val	Leu	Ser	Trp	Ser 30	Arg	Glu
Leu	Pro	Cys 35	Ala	Trp	Arg	Ala	Leu 40	His	Thr	ser	Pro	Val 45	Cys	Ala	Lys
Asn	Arg 50	Ala	Ala	Arg	Val	Arg 55	Val	Ser	Lys	Gly	Asp 60	Lys	Pro	Val	Thr
Tyr 65	Glu	Glu	Ala	His	Ala 70	Pro	His	Tyr	Ile	Ala 75	His	Arg	Lys	Gly	Trp 80
Leu	Ser	Leu	His	Thr 85	Gly	Asn	Leu	Asp	Gly 90	Glu	Asp	His	Ala	Ala 95	Glu
Arg	Thr	Val	Glu 100	Asp	Val	Phe	Leu	Arg 105	Lys	Phe	Met	Trp	Gly 110	Thr	Phe

Pro	Gly	Cys 115	Leu	Ala	Asp	Gln	120	Vai	Leu	rys	Arg	125	GIŸ	ASII	GIN
Leu	Glu 130	Ile	Cys	Ala	Val	Val 135	Leu	Arg	Gln	Leu	Ser 140	Pro	His	Lys	Tyr
туг 145	Phe	Leu	Val	Gly	Tyr 150	Ser	Glu	Thr	Leu	Leu 155	Ser	Tyr	Phe	Tyr	Lys 160
Cys	Pro	Val	Arg	Leu 165	His	Leu	Gln	Thr	V <b>al</b> 170	Pro	Ser	Lys	Val	Val 175	Tyr
Lys	Tyr	Leu													
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Pro	Leu	Glu	Ser 20	Ser	Ser	Ser	Met	Pro 25	Leu	Ser	Phe	Pro	Ser 30	Leu	Leu
Pro	Ser	Val 35	Pro	His	Asn	Thr	Asn 40	Pro	Ser	Pro	Pro	Leu 45	Met	Ser	Tyr
Ile	Thr 50	Ser	Gln	Glu	Met	Lys 55	Суз	Ile	Leu	His	Trp 60	Phe	Ala	Asn	Trp
Ser 65	Gly	Pro	Gln	Arg	Glu 70	Arg	Phe	Leu	Glu	Asp 75	Leu	Val	Ala	Lys	Ala 80
Val	Pro	Glu	Lys	Leu 85		Pro	Leu	Leu	Asp 90	Ser	Leu	Glu	Gln	Leu 95	Ser
Val	Ser	Gly	Ala 100		Arg	Pro	Pro	Ser 105		Phe	Glu	Cys	Gln 110	Leu	His
Leu	Trp	Asp 115		Trp	Phe	Arg	Gly 120		Ala	Glu	Gln	Glu 125	Arg	Asn	Glu
Phe	val 130		Gln	Leu	Glu	Phe		Glu	Pro	Asp	Phe 140	val	Ala	Lys	Phe

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Tyr Gln Ala Val Ala Ala Thr Ala Gly Lys Asp 145 150 155

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WO 00/55350

<211> 449

<212> PRT

<213> Homo sapiens

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Leu Ala Arg Gln Ala Val Arg Tyr Ile Asn Glu Asn Leu Ile Val Asn 20 25 30

Thr Asp Glu Leu Gly Arg Asp Cys Leu Ile Asn Ala Ala Lys Thr Ser 35 40 45

Met Ser Ser Lys Ile Ile Gly Ile Asn Gly Asp Phe Phe Ala Asn Met 50 60

Val Val Asp Ala Val Leu Ala Ile Lys Tyr Thr Asp Ile Arg Gly Gln 65 70 .75 80

Pro Arg Tyr Pro Val Asn Ser Val Asn Ile Leu Lys Ala His Gly Arg 85 90 95

Ser Gln Met Glu Ser Met Leu Ile Ser Gly Tyr Ala Leu Asn Cys Val 100 105 110

Val Gly Ser Gln Gly Met Pro Lys Arg Ile Val Asn Ala Lys Ile Ala 115 120 125

Cys Leu Asp Phe Ser Leu Gln Lys Thr Lys Met Lys Leu Gly Val Gln 130 135 140

Val Val Ile Thr Asp Pro Glu Lys Leu Asp Gln Ile Arg Gln Arg Glu 145 150 155 160

Ser Asp Ile Thr Lys Glu Arg Ile Gln Lys Ile Leu Ala Thr Gly Ala 165 170 175

Asn Val Ile Leu Thr Thr Gly Gly Ile Asp Asp Met Cys Leu Lys Tyr 180 185 190

Phe Val Glu Ala Gly Ala Met Ala Val Arg Arg Val Leu Lys Arg Asp 195 200 205

Leu Lys Arg Ile Ala Lys Ala Ser Gly Ala Thr Ile Leu Ser Thr Leu

1337

	210					215					220				
Ala 225	Asn	Leu	Glu	Gly	Glu 230	Glu	Thr	Phe	Glu	Ala 235	Ala	Met	Leu	Gly	Gln 240
Ala	Glu	Glu	Val	Val 245	Gln	Glu	Arg	Ile	Cys 250	Asp	Asp	Glu	Leu	Ile 255	Leu
Ile	Lys	Asn	Thr 260	Lys	Ala	Arg	Thr	Ser 265	Ala	Ser	Ile	Ile	Leu 270	Arg	Gly
Ala	Asn	Asp 275	Phe	Met	Cys	Asp	Glu 280	Met	Glu	Arg	Ser	Leu 285	His	Asp	Ala
Leu	Cys 290	Val	Val	Lys	Arg	Val 295	Leu	Glu	Ser	Lys	Ser 300	Val	Val	Pro	Gly
Gly 305	Gly	Ala	Val	Glu	Ala 310	Ala	Leu	Ser	Ile	Tyr 315	Leu	Glu	Asn	Tyr	Ala 320
Thr	Ser	Met	Gly	Ser 325	Arg	Glu	Gln	Leu	Ala 330	Ile	Ala	Glu	Phe	Ala 335	
Ser	Leu	Leu	Val 340		Pro	Asn	Thr	Leu 345	Ala	Val	Asn		Ala 350	Gln	Asp
Ser	Thr	Asp 355	Leu	Val	Ala	Lys	Leu 360	Arg	Ala	Phe	His	Asn 365	Glu	Ala	Gln
Val	Asn 370	Pro	Glu	Arg	Lys	Asn 375	Leu	Lys	Trp	Ile	Gly 380	Leu	Asp	Leu	Ser
Asn 385	Gly	Lys	Pro	Arg	Asp 390	Asn	Lys	Gln	Ala	Gly 395	Val	Phe	Glu	Pro	Thr 400
Ile	Val	Lys	Val	Lys 405	Ser	Leu	Lys	Phe	Ala 410	Thr	Glu	Ala	Ala	Ile 415	Thr
Ile	Leu	Arg	Ile 420	Asp	Asp	Leu	Ile	Lys 425	Leu	His	Pro	Glu	Ser 430	Lys	Asp
Asp	Lys	His 435	Gly	Ser	Туг	Glu	Asp 440	Ala	Val	His	Ser	Gly 445	Ala	Leu	Asn
Asp															

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Tyr Lys Asn Cys Phe Leu His Pro Cys Gly Ala Tyr Ser Ser Glu Pro 20 25 30

Ser Pro Gln Ser Gln Cys Leu Cys Phe Leu Phe Tyr Phe Cys Ser Ile 35 40 45

Arg Phe Leu Leu Leu Cys Leu Lys Ser Ser Leu Gly Ser Tyr Gln 50 55 60

Gly Phe Ser Phe Cys Val Ala Phe Ala Ala Trp Ile Lys His Trp Leu 65 70 75 80

Thr Val Leu Met Cys Glu Glu Lys Lys Phe Ser Lys Ala Gly Glu Leu 85 90 95

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<213> Homo sapiens

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Gly Glu Pro Lys Met Thr Gly Ser Asn Glu Phe Lys Leu Asn Gln Pro 1 5 10 15

Pro Glu Asp Gly Ile Ser Ser Val Lys Phe Ser Pro Asn Thr Ser Gln 20 25 30

Phe Leu Leu Val Ser Ser Trp Asp Thr Ser Val Arg Leu Tyr Asp Val
35 40 45

Pro Ala Asn Ser Met Arg Leu Lys Tyr Gln His Thr Gly Ala Val Leu 50 55 60

Asp Cys Ala Phe Tyr Asp Pro Thr His Ala Trp Ser Gly Gly Leu Asp 65 70 75 80

His Gln Leu Lys Met His Asp Leu Asn Thr Asp Gln Glu Asn Leu Val 85 90 95

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Gly	Thr	His	100	Ala	Pro	Ile	Arg	Cys 105	Val	Glu	Tyr	Cys	110	Glu	Val
Asn	Val	Met 115	Val	Thr	Gly	Ser	Trp 120	Asp	Gln	Thr	Val	Lys 125	Leu	Trp	Asp
Pro	Arg 130	Thr	Pro	Cys	Asn	Ala 135	Gly	Thr	Phe	Ser	Gln 140	Pro	Glu	Lys	Val
Tyr 145	Thr	Leu	Ser	Val	Ser 150	Gly	Asp	Arg	Leu	Ile 155	Val	Gly	Thr	Ala	Gly 160
Arg	Arg	Val	Leu	Val 165	Trp	Asp	Leu	Arg	Asn 170	Met	Gly	Туr	Val	Gln 175	Gln
Arg	Arg	Glu	Ser 180	Ser	Leu	Lys	Tyr	Gln 185	Thr	Arg	СЛа	Ile	Arg 190	Ala	Phe
Pro	Asn	Lys 195	Gln	Gly	Tyr	Val	Leu 200	Ser	Ser	Ile,	Glu	Gly 205	Arg	Val	Ala
Val	Glu 210	Tyr	Leu	Asp-	Pro	Ser 215	Pro	Glu	Val-	Gln-	Lys 220	Lys	Lys-	Tyr	Ala
225					230					235				Tyr	240
Val	Asn	Ala	Ile	Ser 245	Phe-	His	Asn	Ile	His 250	Asn	Thr	Phe	Ala	Thr 255	Gly
			260					265					270	Lys	
		275					280					285		Ala	
	290					295					300			Tyr	
Met 305	Asp	Asp	Thr	Glu	His 310	Pro	Glu	Asp	Gly	11e 315	Phe	Ile	Arg	Gln	Val 320
Thr	Asp	Ala	Glu	Thr 325	Lys	Pro	Lys	Ser	Pro 330	Cys	Thr				

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Cys	Leu	Ser	Val 20		Cys	Leu	ser	Ala 25		Lys	Ile	Ala	His 30		Gly
Pro	Asp	Ala 35		Arg	Phe	Glu	Asn 40		Asn	Gly	Туг	Thr 45		Cys	Cys
Phe	Gly 50		His	Arg	Leu	Ala 55		Val	Asp	Pro	Leu 60	Phe	Gly	Met	Gln
Pro 65	Ile	Arg	Val	Lys	Lys 70	туг	Pro	Tyr	Leu	Trp 75	Leu	Cys	Tyr	Asn	Gly 80
Glu	Ile	туr	Asn	His 85	Lys	Lys	Met	Gln	Gln 90	His	Phe	Glu	Phe	Glu 95	Tyr
Gln	Thr	Lys	Val 100	Asp	Gly	Glu	Ile	Ile 105	Leu	His	Leu	Туг	Asp 110	Lys	Gly
Gly	Ile	Glu 115	Gln	Thr	Ile	Cys	Met 120	Leu	Asp	Gly	Val	Phe 125	Ala	Phe	Val
Leu	Leu 130	Asp	Thr	Ala	Asn	Lys 135	Lys	Val	Phe	Leu	Gly 140	Arg	Asp	Thr	Tyr
Gly 145	Val	Arg	Pro	Leu	Phe 150	Lys	Ala	Met	Thr	Glu 155	Asp	Gly	Phe	Leu	Ala 160
Val	Cys	Ser	Glu	Ala 165	Lys	Gly	Leu	Val	Thr 170	Leu	Lys	His	Ser	Ala 175	Thr
Pro	Phe	Leu	Lys 180	Val	Glu	Pro	Phe	Leu 185	Pro	Gly	His	туr	Glu 190	Val	Leu
Asp	Leu	Lys 195	Pro	Asn	Gly	Lys	Val 200	Ala	Ser	Val	Glu	Met 205	Val	Lys	Tyr
His	His 210	Cys	Arg	Asp	Glu	Pro 215	Leu	His	Ala	Leu	Tyr 220	Asp	Asn	Val	Glu
Lys 225	Leu	Phe	Pro	Gly	Phe 230	Glu	Ile	Glu	Thr	Val 235	Lys	Asn	Asn	Leu	Arg 240
Ile	Leu	Phe	Asn	Asn 245	Ala	Val	Lys	Lys	Arg 250	Leu	Met	Thr	_	Arg 255	Arg
Ile	Gly	Cys	Leu	Leu	Ser	Gly	Gly	Leu	Asp	ser	Ser	Leu	Val	Ala	Ala

				260					265					270		
Т	'hr	Leu	Leu 275	Lys	Gln	Leu	Lys	Glu 280	Ala	Gln	Val	Gln	Туг 285	Pro	Leu	Gln
1	hr	Phe 290	Ala	Ile	Gly	Met	Glu 295	Asp	Ser	Pro	Asp	Leu 300	Leu	Ala	Ala	Arg
	ys 105	Val	Ala	Asp	His	Ile 310	Gly	Ser	Glu	His	Туг 315	Glu	Val	Leu	Phe	Asn 320
٤	er	Glu	Glu	Gly	Ile 325	Gln	Ala	Leu	Asp	Glu 330	Val	Ile	Phe	Ser	Leu 335	Glu
T	hr	Tyr	Asp	11e 340	Thr	Thr	Val	Arg	Ala 345	Ser	Val	Gly	Met	Туг 350	Leu	Ile
S	er	Lys	Tyr 355	Ile	Arg	Lys	Asn	Thr 360	Asp	Ser	Val <sup>.</sup>	Val	11e 365	Phe	Ser	Gly
		370					375	Gln				380				
3	885					390		Glu			395					400
					405			Arg		410					415	
				420				Phe	425					430		
			435					Met 440					445			
		450					455	Phe				460				
•	465					470		Glu			475					480
					485			Ile		490					495	
				500				Asn	505					510		
			515					Tyr 520					525			
1	His	Tyr	Pro	Gly	Arg	Ala	Asp	Trp	Leu	Ser	His	Tyr	Trp	Met	Pro	Lys

	530					535					540				
Trp 545	Ile	Asn	Ala	Thr	Asp 550		Ser	Ala	Arg	Thr 555		Thr	His	туг	Lys 560
Ser	Ala	Val	Lys	Ala 565											
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Leu	Leu	Leu	Pro 20	Pro	Arg	Leu	Gln	Leu 25	Pro	Ala	Gly	Pro	Phe 30	Ser	Arg
Cys	Arg	Trp 35	Asp	Pro	Val	Ser	Ser 40	Pro	Arg	Pro	Ser	Thr 45	Met	Pro	Pro
Lys	Lys 50	Gly	Gly	Asp	Gly	Ile 55	Lys	Pro	Pro	Pro	Ile 60	Ile	Gly	Arg	Phe
Gly 65	Thr	Ser	Leu	Lys	Ile 70	Gly	Ile	Val	Gly	Leu 75	Pro	Asn	Val	Gly	Lys
Ser	Thr	Phe	Phe	Asn 85	Val	Leu	Thr	Asn	Ser 90	Gln	Ala	Ser	Ala	Glu 95	Asn
Phe	Pro	Phe	Cys 100	Thr	Ile	Asp	Pro	Asn 105	Glu	Ser	Arg	Val	Pro 110	Val	Pro
Asp	Glu	Arg 115	Phe	Asp	Phe	Leu	Cys 120	Gln	Tyr	His	Lys	Pro 125	Ala	Ser	Lys
Ile	Pro 130	Ala	Phe	Leu	Asn	Val 135	Val	Asp	Ile	Ala	Gly 140	Leu	Val	Lys	Gly
Ala 145	His	Asn	Gly	Gln	Gly 150	Leu	Gly	Asn	Ala	Phe 155	Leu	Ser	His	Ile	Ser 160
Ala	Cys	Asp	Gly	Ile 165	Phe	His	Leu	Thr	Arg 170	Ala	Phe	Glu	Asp	Asp 175	Asp
Ile	Thr	His	Val	Glu	Gly	Ser	Val	Asp	Pro	Ile	Arg	Asp	Ile	Glu	Ile

185

190

Ile	His	G1u 195	Glu	Leu	Gln	Leu	Lys 200	Asp	Glu	Glu	Met	11e 205	Gly	Pro	Ile
Ile	Asp 210	Lys	Leu	Glu	Lys	Val 215	Ala	Val	Arg	Gly	Gly 220	Asp	Lys	Lys	Leu
Lys 225	Pro	Glu	туг	Asp	Ile 230	Met	Суѕ	Lys	Val	Lys 235	Ser	Trp	Val	Ile	Asp 240
Gln	Lys	Lys	Pro	Val 245	Arg	Phe	Tyr	His	Asp 250	Trp	Asn	Asp :	Lys	Glu 255	Ile
Glu	Val	Leu	Asn 260	Lys	His	Leu	Phe	Leu 265	Thr	Ser	Lys	Pro	<b>Met</b> 270	Val	Tyr
Leu	Val	Asn- 275	Leu	Ser	Glu	Lys	Asp 280	Tyr	Ile	Arg	Lys	Lys 285	Asnī	Lys	Trp
Leu	11e 290	Lys	Ile	Lys	Glu	Trp 295	Val	Asp	Lys	Tyr	Asp 300	Pro	Gly	Ala	Leu
Val 305	Ile	Pro	Phe	Ser	Gly 310	Ala	Leu	Glu	Leu	Lys 315	Leu	Gln	Glu	Leu	Ser 320
Ala	Glu	Glu	Arg	Gln 325	Lys	Tyr	Leu	Glu	Ala 330	Asn	Met	Thr	Gln	Ser 335	
Leu	Pro	Lys	Ile 340	Ile	Lys	Ala	Gly	Phe 345	Ala	Ala	Leu	Gln	Leu 350	Glu	Tyr :
Phe	Phe	Thr 355	Ala	Gly	Pro	Asp	Glu 360	Val	Arg	Ala	Trp	Thr 365	Ile	Arg	Lys
Gly	Thr 370	Lys	Ala	Pro	Gln	Ala 375	Ala	Gly	Lys	Ile	His 380	Thr	Asp	Phe	Glu
Lys 385	Gly	Phe	Ile	Met	Ala 390	Glu	Val	Met	Lys	Туг 395	Glu	Asp	Phe	Lys	Glu 400
Glu	Gly	Ser	Glu	Asn 405	Ala	Val	Lys	Ala	Ala 410	Gly	Lys	Tyr	Arg	Gln 415	Gln
Gly	Arg	Asn	Tyr 420	Ile	Val	Glu	Asp	Gly 425	Asp	Ile	Ile	Phe	Phe 430	Lys	Phe
Asn	Thr	Pro 435	Gln	Gln	Pro	Lys	Lys 440	Lys							

<210> 1304

<211> 94

<212> PRT

<213> Homo sapiens

<400> 1304

Glu Lys Lys Arg Gly Arg Glu Asp Lys Pro Gly Thr Met Ala Thr Phe 1 5 10 15

Pro Pro Ala Thr Ser Ala Pro Gln Gln Pro Pro Gly Pro Glu Asp Glu 20 25 30

Asp Ser Ser Leu Asp Glu Ser Asp Leu Tyr Ser Leu Ala His Ser Tyr 35 40 45

Leu Gly Gly Gly Arg Lys Gly Arg Thr Lys Arg Glu Ala Ala Ala 50 55 60

Asn Thr Asn Arg Pro Ser Pro Gly Gly His Glu Arg Lys Leu Val Thr 65 70 75 80

Lys Leu Gln Asn Ser Glu Arg Lys Lys Arg Gly Ala Arg Arg 85 90

<210> 1305

<211> 82

<212> PRT

<213> Homo sapiens

<400> 1305

Val Ile Leu Glu Met Val Ile Val Phe Cys Leu Val Thr Phe Ala Thr 1 5 10 15

Val Pro Phe Lys Thr Met Trp Lys Pro Gln Val Cys Gly Gln His Arg

Trp Asn Asp Ile Leu Cys Phe Leu Arg Leu Pro Ser Thr Arg His Ile  $35 \hspace{1.5cm} 40 \hspace{1.5cm} 45$ 

Ser Leu Val Leu Gln Met Ser Ala Gln Val Leu Val Thr Ser Phe Ser 50 55 60

Cys Cys Pro Gly Lys Ser Val Cys Ala Gly Ala Gly Ala Leu Ala Leu 65 70 75 80

Phe Arg

1345

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Ile Glu Phe Asn Lys Glu Ile Pro Ala Trp Val Pro Phe Asp Pro Ala
                                 25
Ala Gln Ile Thr Lys Gln Lys Trp Glu Ala Glu Pro Val Tyr Val Gln
                             40
Arg Ala Lys Ala Tyr Leu Glu Glu Glu Cys Pro Ala Thr Leu Arg Lys
Tyr Leu Lys Tyr Ser Lys Asn Ile Leu Asp Arg Gln Asp Pro Pro Ser
                     70
Val Val Val Thr Ser His Gln Ala Pro Gly Glu Lys Lys Leu Lys
Cys Leu Ala Tyr Asp Phe Tyr Pro Gly Lys Ile Asp Val His Trp Thr
                                105
Arg Ala Gly Glu Val Gln Glu Pro Glu Leu Arg Gly Asp Val Leu His
        115
Asn Gly Asn Gly Thr Tyr Gln Ser Trp Val Val Val Ala Val Pro Pro
                        135
Gln Asp Thr Ala Pro Tyr Ser Cys His Val Gln His Ser Ser Leu Ala
                   150
                                       155
                                                           160
Gln Pro Leu Val Val Pro Trp Glu Ala Ser
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<221> SITE

1347

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Arg Lys Gln His Ser Leu Leu Lys Arg Leu Arg Lys Ala Lys Lys Glu
                                 25
Ala Pro Pro Met Glu Lys Pro Glu Val Val Lys Thr His Leu Arg Asp
                             40
Met Ile Ile Leu Pro Glu Met Val Gly Ser Met Val Gly Val Tyr Asn
Gly Lys Thr Phe Asn Gln Val Glu Ile Lys Pro Glu Met Ile Gly His
                                        75
                70
Tyr Leu Gly Glu Phe Ser Ile Thr Tyr Lys Pro Val Lys His Xaa Arg
Pro Gly Ile Gly Ala Thr His Xaa Ser Arg Phe Ile Pro Leu Lys
                               105
            100
<210> 1309
<211> 121
<212> PRT
<213> Homo sapiens
<400> 1309
Pro Val Ser Pro Gln Glu Arg Pro Pro Pro Tyr Leu Ala Val Pro Gly
                  5
His Gly Glu Glu Tyr Pro Val Ala Gly Ala His Ser Ser Pro Pro Lys
                                 25
Ala Arg Phe Leu Arg Val Pro Ser Glu His Pro Tyr Leu Thr Pro Ser
Pro Glu Ser Pro Glu His Trp Ala Ser Pro Ser Pro Pro Ser Leu Ser
                         55
Asp Trp Ser Glu Ser Thr Pro Ser Pro Ala Thr Ala Thr Gly Ala Met
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Pro	Ser	Ser	Leu 100		Gln	Ala	Gln	Thr 105		Leu	Gly	Pro	Gln 110		Glu
Val	Thr	Pro	-	Arg	Gln	Val	Leu 120								
<21	0> 1 1> 2	06													
	2> P 3> H	ОШО	sapi	ens											
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Gln 1	Cys	Pro	Gly	Arg 5	Ala	Gly	Ala	Pro	Gln 10	Thr	Arg	Ala	Pro	Arg 15	Ala
Arg	Glu	Arg	Gly 20		Ala	Met	Ala	Thr 25	Ala	Asn	Gly	Ala	Val 30	Glu	Asn
Gly	Gln	Pro 35	Asp	Arg	Lys	Pro	Pro 40	Ala	Leu	Pro	Arg	Pro 45	Ile	Arg	Asn
Leu	Glu 50	Val	Lys	Phe	Thr	Lys 55	Ile	Phe	Ile	Asn	Asn 60	Glu	Trp	His	Glu
Ser 65	Lys	Ser	Gly	Lys	Lys 70	Phe	Ala	Thr	Cys	Asn 75	Pro	Ser	Thr	Arg	Glu 80
Gln	Ile	Cys	Glu	Val 85	Glu	Glu	Gly	Asp	Lys 90	Pro	Asp	Val	Asp	Lys 95	Ala
Val	Glu	Ala	Ala 100	Gln	Val	Ala	Phe	Gln 105	Arg	Gly	Ser	Pro	Trp 110	Arg	Arg
Leu	Asp	Ala 115	Leu	Ser	Arg	Gly	Arg 120	Leu	Leu	His	Gln	Leu 125	Ala	Asp	Leu
Val	Glu 130	Arg	Asp	Arg	Ala	Thr 135	Leu	Ala	Ala	Leu	Glu 140	Thr	Met	Asp	Thr
Gly 145	Lys	Pro	Phe	Leu	ніs 150	Ala	Phe	Phe	Ile	Asp 155	Leu	Glu	Gly	Cys	Ile 160
Arg	Thr	Leu	Arg	Туг 165	Phe	Ala	Gly		Ala 170	Asp	Lys	Ile	Gln	Gly 175	Lys

1349

Thr Ile Pro Thr Asp Asp Asn Val Cys Ala Ser Pro Gly Met Ser Pro 180 185 190

Leu Val Ser Val Gly Pro Ser Leu His Gly Thr Ser Pro Cys 195 200 205

<210> 1311

<211> 142

<212> PRT

<213> Homo sapiens

<400> 1311

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Pro Ala Leu Ile Arg Cys Cys Thr Arg Gly Leu Ile Arg Pro Val Ser

Ala Ser Phe Leu Asn Ser Pro Val Asn Ser Ser Lys Glm Pro Ser Tyr

Ser Asn Phe Pro Leu Gln Val Ala Arg Arg Glu Phe Gln Thr Ser Val 50 55 60

Val Ser Arg Asp Ile Asp Thr Ala Ala Lys Phe Ile Gly Ala Gly Ala 65 70 75 80

Ala Thr Val Gly Val Ala Gly Ser Gly Ala Gly Ile Gly Thr Val Phe 85 90 95

Gly Ser Leu Ile Ile Gly Tyr Ala Arg Asn Pro Ser Leu Lys Gln Gln 100 105 110

Leu Phe Ser Tyr Ala Ile Leu Gly Phe Ala Leu Ser Glu Ala Met Gly

Leu Phe Cys Leu Met Val Ala Phe Leu Ile Leu Phe Ala Met 130 135 140

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<211> 495

<212> PRT

<213> Homo sapiens

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<22	1> S	ITE													
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<22	0>														
<22	1> s	ITE													
<22	2> (	460)													
			qual	s an	y of	the	nat	ural	ly o	ccur	ring	L-a	mino	aci	ds
	0> 1														
Arg 1	Arg	Met	Glu	Gly 5	Gln	Asp	Glu	Val	Ser 10	Ala	Arg	Glu	Gln	His 15	Phe
His	Ser	Gln	Val 20	Arg	Glu	Ser	Thr	Ile 25	Cys	Phe	Leu	Leu	Phe 30	Ala	Ile
Leu	Tyr	Val 35		Ser	туг	Phe	Ile 40	Ile	Thr	Arg	Tyr	Lys 45	Arg	Lys	Ser
Asp	Glu 50	Gln	Glu	Asp	Glu	Asp 55	Ala	Ile	Val	Asn	Arg 60	Ile	Ser	Leu	Phe
Leu 65	Ser	Thr	Phe	Thr	Leu 70	Ala	Val	Ser	Ala	Gly 75	Ala	Val	Leu	Leu	Leu 80
Pro	Phe	Ser	Ile	Ile 85	ser	Asn	Glu	Ile	Leu 90	Leu	Ser	Phe	Pro	Gln 95	Asn
Tyr	Tyr	Ile	Gln 100	Trp	Leu	Asn	Gly	Ser 105	Leu	Ile	His	Gly	Leu 110	Trp	Asn
Leu	Ala	Ser 115	Leu	Phe	Ser	Asn	Leu 120	Xaa	Leu	Phe	Val	Leu 125	Met	Pro	Phe
Ala	Phe 130	Phe	Phe	Leu	Glu	Ser 135	Glu	Gly	Phe	Ala	Gly 140	Leu	Lys	Lys	Gly
Ile	Ara	Ala	Arc	Tle	Len	Glu	Thr	Lev	va 1	Met	T.eu	Lev	Len	Lev	Ala
145	9				150			204		155				200	160
Leu	Leu	Ile	Leu	Gly 165	Ile	val	Trp	Val	Ala 170	Ser	Ala	Leu	Ile	Asp 175	Asn
Asp	Ala	Ala	Ser 180	Met	Glu	Ser	Leu	Tyr 185	Asp	Leu	Trp	Glu	Phe 190	Tyr	Leu
Pro	туг	Leu	Tyr	ser	Cys	Ile	ser	Leu	Met	Gly	Cys	Leu	Leu	Leu	Leu

		195					200					205			
Le	210	Thr	Pro	Val	Gly	Leu 215	Ser	Arg	Met	Phe	Thr 220	Val	Met	Gly	Gln
Le:	ı Leu 5	Val	Lys	Pro	Thr 230	Ile	Leu	Glu	Asp	Leu 235	Asp	Glu	Gln	Ile	туr 240
Ile	e Ile	Thr	Leu	Glu 245	Glu	Glu	Ala	Leu	Gln 250	Arg	Arg	Leu	Asn	Gly 255	Leu
Se	r Ser	Ser	Val 260	Glu	туг	Asn	Ile	Met 265	Glu	Leu	Glu	Gln	Glu 270	Leu	Glu
Ası	n Val	Lys 275	Thr	Leu	Lys	Thr	Lys 280	Leu	Asp	Pro	Trp	ser 285	Ser	Phe	Ser
Va.	1 Leu 290	Gln	Ser	Pro	Val	Trp 295	His	Phe	Ala	Ala	Gln 300	Thr	Pro	Ala	Asp
11d	e Val	Ser	Pro	Asp	Ser 310	His	Phe	Met	Leu	Ser 315	Thr	Gln	Gly	Met	Ser 320
Tr	p Ala	Gln	Leu	Val 325	Phe	Leu	Leu	Pro	Ala 330	Ser	Arg	Pro	Gly	Asn 335	Ser
Gl	n Asp	Lys	Arg 340	Arg	Lys	Lys	Ala	Ser 345	Ala	Trp	Glu	Arg	Asn 350	Leu	Val
ту	r Pro	Ala 355	Val	Met	Val	Leu	Leu 360	Leu	Ile	Glu	Thr	Ser 365	Ile	Ser	Val
Le	u Leu 370	Val	Ala	Cys	Asn	Ile 375	Leu	Суѕ	Leu	Leu	Val 380	Asp	Glu	Thr	Ala
ме 38	t Pro 5	Lys	Gly	Thr	Arg 390	Gly	Xaa	Gly	Ile	Gly 395	Asn	Ala	Ser	Leu	Ser 400
Th	r Phe	Gly	Phe	Val 405	Gly	Ala	Ala	Leu	Glu 410	Ile	Ile	Leu	Ile	Phe 415	Tyr
Le	u Met	Val	Ser 420	Ser	Val	Val	Gly	Phe 425	Tyr	Ser	Leu	Arg	Phe 430	Phe	Gly
As	n Phe	Thr 435	Pro	Lys	Lys	Asp	Asp 440	Thr	Thr	Met	Thr	Lys 445	Ile	Ile	Gly
As	n Cys 450		Ser	Ile	Leu	Val 455	Leu	Ser	Ser	Ala	Xaa 460	Pro	Val	Met	Ser
Ar	g Thr	Leu	Gly	Leu	His	Lys	Leu	His	Leu	Pro	Asn	Thr	Ser	Arg	Asp

1352

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His	Туг 210	Pro	Asn	Gly	Val	Val 215		Val	Asn	Cys	Ala 220	Arg	Ile	Ile	His
Gly 225	Asn	Gln	Ile	Ala	Thr 230	Asn	Gly	Val	Val	His 235	Val	Ile	Asp	Arg	Val 240
Leu	Thr	Gln	Ile	Gly 245		Ser	Ile	Gln	Asp 250		Ile	Glu	Ala	Glu 255	Asp
Asp	Leu	Ser	Ser 260	Phe	Arg	Ala	Ala	Ala 265	Ile	Thr	Ser	Asp	Ile 270	Leu	Glu
Ala	Leu	Gly 275	Arg	Asp	Gly	His	Phe 280	Thr	Leu	Phe	Ala	Pro 285	Thr	Asn	Glu
Ala	Phe 290	Glu	Lys	Leu	Pro	Arg 295	Gly	Val	Leu	Glu	Arg 300	Ile	Met	Gly	Asp
Lys 305	Val	Ala	Ser	Glu	Ala 310	Leu	Met	Lys	туг	His 315	Ile	Leu	Asn	Thr	Leu -320
Gln	Суз	Ser	Glu	Ser 325	Ile	Met	Gly	Gly	Ala 330	Val	Phe	Glu	Thr	Leu 335	Glu
Gly	Asn	Thr	Ile 340	Glu	Ile	Gly	Суѕ	Asp 345	Gly	Asp	Ser	Ile	Thr 350	Val	Asn
Gly	Ile	155 355	Met	Val	Asn	Lys	Lys 360	Asp	Ile	Val	Thr	Asn 365	Asn	Gly	Val
Ile	His 370	Leu	Ile	Asp	Gln	Val 375	Leu	Ile	Pro	Asp	Ser 380	Ala	Lys	Gln	Val
385					390	Gln				395		-			400
Gln	Leu	Gly	Leu	Ala 405	Ser	Ala	Leu	Arg	Pro 410	Asp	Gly	Glu	Tyr	Thr 415	Leu
			420			Ala		425					430		-
		435				Ile	440					445			_
	450					Tyr 455					460				-
Gly 465	Lys	Gln	Leu	Arg	Val 470	Phe	Val	Туг	Arg	Thr 475	Ala	Val	Суѕ	Ile	Glu 480

WO 00/55350

Asn	Ser	Cys	Met	485		Gl <sub>y</sub>	/ Ser	Lys	490	n Gly	/ Arg	g Ası	n Gly	495	
His	Ile	Phe	500		ı Ile	: Ile	e Lys	505		a Glu	ı Lys	Ser	510		Gl:
Lys	Leu	Lys 515		Asp	Lys	Arg	9 Phe 520		Thi	Phe	e Leu	525		Let	ı Glı
Ala	Ala 530		Leu	Lys	Glu	Leu 535		Thr	Glr	Pro	Gly 540		Trp	Thr	Let
Phe 545		Pro	Thr	Asn	Asp 550		Phe	Lys	Gly	Met 555	Thr	Ser	Glu	Glu	Lys 560
Glu	Ile	Leu	Ile	Arg 565		Lys	Asn	Ala	Leu 570		Asn	Ile	Ile	Leu 575	
His	Leu	Thr	Pro 580		Val	Phe	Ile	Gly 585		Gly	Phe	Glu	Pro 590	Gly	Val
Thr	Asn	Ile 595		Lys	Thr	Thr	Gln 600	Gly	Ser	Lys	Ile	Phe 605		Lys	Glu
Val	Asn 610	Asp	Thr	Leu	Leu	Val 615	Asn	Glu	Leu	Lys	Ser 620	Lys	Glu	Ser	Asp
11e 625	Met	Thr	Thr	Asn	Gly 630	Val	Ile	His	Val	Val 635	Asp	Lys	Leu	Leu	Tyr 640
Pro	Ala	Asp	Thr	Pro 645	Val	Gly	Asn	Asp	Gln 650	Leu	Leu	Glu	Ile	Leu 655	Asn
Lys	Leu	Ile	Lys 660	Tyr	Ile	Gln	Ile	Lys 665	Phe	Val	Arg	Gly	Ser 670	Thr	Phe
Lys	Glu	Ile 675	Pro	Val	Thr	Val	Tyr 680	Lys	Pro	Ile	Ile	Lys 685	Lys	Tyr	Thr
Lys	Ile 690	Ile	Asp	Gly	Val	Pro 695	Val	Glu	Ile	Thr	Glu 700	Lys	Glu	Thr	Arg
Glu 705	Glu	Arg	Ile	Ile	Thr 710	Gly	Pro	Glu	Ile	Lys 715	Tyr	Thr	Arg	Ile	Ser 720
Thr	Gly	Gly	Gly	Glu 725	Thr	Glu	Glu	Thr	Leu 730	Lys	Lys	Leu	Leu	Gln 735	Glu
Glu	Val	Thr	Lys	Val	Thr	Lys	Phe	Ile	Glu	Gly	Gly	Asp	Gly	His	Leu

745

1355

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Arg Lys Leu Gln Ala Asn Lys Lys Val Gln Gly Ser Arg Arg Leu
                      775
Arg Glu Gly Arg Ser Gln
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Thr Ser Trp Ala Phe Asp Glu Thr Gly Xaa Asn Thr Ala Val Phe Leu
                                     10
Leu Glu Ile Xaa Trp Gly Ile Phe Phe Glu Leu Met Gly Thr Ile Arg
             20
His Asn Cys Leu His Lys Leu Gly Ile Kaa Asp Phe Gly Ile Thr Ile
                             40
Tyr Gln Asn Gly Asp Ile Ser Pro Leu Val Leu Arg Cys Lys Pro Lys
                         55
     50
Asn Ile Met Thr Ser Phe Gln Ala Ser
                     70
 65
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<210> 1315

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<212> PRT

<213> Homo sapiens

<400> 1315

Pro Gly Arg Pro Thr Arg Pro Arg Thr Arg Gly Ile Asn Lys Leu Ile
1 5 10 15

Arg Ile Gly Arg Asn Glu Cys Val Val Val Ile Arg Val Asp Lys Glu
20 25 30

Lys Gly Tyr Ile Asp Leu Ser Lys Arg Arg Val Ser Pro Glu Glu Ala 35 40 45

Ile Lys Cys Glu Asp Lys Phe Thr Lys Ser Lys Thr Val Tyr Ser Ile 50 55 60

Leu Arg His Val Ala Glu Val Leu Glu Tyr Thr Lys Asp Glu Gln Leu 65 70 75 80

Glu Ser Leu Phe Gln Arg Thr Ala Trp Val Phe Asp Asp Lys Tyr Lys  $85 \hspace{1cm} 90 \hspace{1cm} 95$ 

Arg Pro Gly Tyr Gly Ala Tyr Asp Ala Phe Lys His Ala Val Ser Asp 100 105 110

Pro Ser Ile Leu Asp Ser Leu Asp Leu Asp Glu Asp Glu Arg Glu Val 115 120 125

Leu Ile Asn Asn Ile Asn Arg Arg Leu Thr Pro Gln Ala Val Lys Ile 130 135 140

Val Lys Glu Ala Leu Arg Ala Gly Leu Asn Cys Ser Thr Glu Asn Met 165 170 175

Pro Ile Lys Ile Asn Leu Ile Ala Pro Pro Arg Tyr Val Met Thr Thr 180 185 190

Thr Thr Leu Glu Arg Thr Glu Gly Leu Ser Val Leu Ser Gln Ala Met 195 200 . 205

Ala Val Ile Lys Glu Lys Ile Glu Glu Lys Arg Gly Val Phe Asn Val 210 215 220

Gln Met Glu Pro Lys Val Val Thr Asp Thr Asp Glu Thr Glu Leu Ala 225 230 235 240

Arg Gln Met Glu Arg Leu Glu Arg Glu Asn Ala Glu Val Asp Gly Asp

1357

250

245

255

Asp Asp Ala Glu Glu Met Glu Ala Lys Ala Glu Asp 265 <210> 1316 <211> 315 <212> PRT <213> Homo sapiens <400> 1316 Gly Gln Arg Ala Gly Met Pro His Ala Gln Gly Gly Trp Ser Gly Pro 5 Ala Ala Asp Ser Ala Glu Pro Ala Leu Pro Ala Gly Glu Pro Gly Gly Pro Thr Leu Met Arg Leu Asn Ser Val Gln Ser Ser Glu Arg Pro Leu 40 Phe Leu Val His Pro Ile Glu Gly Ser Thr Thr Val Phe His Ser Leu Ala Ser Arg Leu Ser Ile Pro Thr Tyr Gly Leu Gln Cys Thr Arg Ala 75 70 Ala Pro Leu Asp Ser Ile His Ser Leu Ala Ala Tyr Tyr Ile Asp Cys 85 Ile Arg Gln Val Gln Pro Glu Gly Pro Tyr Arg Val Ala Gly Tyr Ser 105 Tyr Gly Ala Cys Val Ala Phe Glu Met Cys Ser Gln Leu Gln Ala Gln 115 Gln Ser Pro Ala Pro Thr His Asn Ser Leu Phe Leu Phe Asp Gly Ser 135 Pro Thr Tyr Val Leu Ala Tyr Thr Gln Ser Tyr Arg Ala Lys Leu Thr 155 150 Pro Gly Cys Glu Ala Glu Ala Glu Thr Glu Ala Ile Cys Phe Phe Val Gln Gln Phe Thr Asp Met Glu His Asn Arg Val Leu Glu Ala Leu Leu 185 Pro Leu Lys Gly Leu Glu Glu Arg Val Ala Ala Ala Val Asp Leu Ile 20**0** 195

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Ile Lys Ser His Gln Gly Leu Asp Arg Gln Glu Leu Ser Phe Ala Ala
 Arg Ser Phe Tyr Tyr Lys Leu Arg Ala Ala Glu Gln Tyr Thr Pro Lys
 225
                     230
                                        235
Ala Lys Tyr His Gly Asn Val Met Leu Leu Arg Ala Lys Thr Gly Gly
                                    250
Ala Tyr Gly Glu Asp Leu Gly Ala Asp Tyr Asn Leu Ser Gln Val Cys
Asp Gly Lys Val Ser Val His Val Ile Glu Gly Asp His Arg Thr Leu
        275
                       280
Leu Glu Gly Ser Gly Leu Glu Ser Ile Ile Ser Ile Ile His Ser Ser
                        295
                                            300
Leu Ala Glu Pro Arg Val Ser Val Arg Glu Gly
                    310
<210> 1317
<211> 191
<212> PRT
<213> Homo sapiens
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Thr Asp Arg Xaa Phe Gly His Glu Xaa Glu Met Ala Pro Asn Ala Ser
Cys Leu Cys Val His Val Arg Ser Glu Glu Trp Asp Leu Met Thr Phe
                             40
Asp Ala Asn Pro Tyr Asp Ser Val Lys Lys Ile Lys Glu His Val Arq
Ser Lys Thr Lys Val Pro Val Gln Asp Gln Val Leu Leu Gly Ser
                    70
Lys Ile Leu Lys Pro Arg Arg Ser Leu Ser Ser Tyr Gly Ile Asp Lys
Glu Lys Thr Ile His Leu Thr Leu Lys Val Val Lys Pro Ser Asp Glu
                                105
Glu Leu Pro Leu Phe Leu Val Glu Ser Gly Asp Glu Ala Lys Arg His
        115
Leu Leu Gln Val Arg Arg Ser Ser Ser Val Ala Gln V&l Lys Ala Met
Ile Glu Thr Lys Thr Gly Ile Ile Pro Glu Thr Gln Ile Val Thr Cys
                    150
Asn Gly Lys Arg Leu Glu Asp Gly Lys Met Met Ala Asp Tyr Gly Ile
                                    170
Arg Lys Gly Asn Leu Leu Phe Leu Ala Xaa Tyr Cys Ile Gly Gly
                                185
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<210> 1318 <211> 230 <212> PRT <213> Homo sapiens

WO 00/55350

Arg Asn Leu Gln Glu Thr Ala Ile Met Ala Glu Lys Pro Lys Leu His 1  $\phantom{-}$  10  $\phantom{-}$  15

Tyr Phe Asn Ala Arg Gly Arg Met Glu Ser Thr Arg Trp Leu Leu Ala 20 25 30

Ala Ala Gly Val Glu Phe Glu Glu Lys Phe Ile Lys Ser Ala Glu Asp 35 40 45

Leu Asp Lys Leu Arg Asn Asp Gly Tyr Leu Met Phe Gln Gln Val Pro 50 55 60

Met Val Glu Ile Asp Gly Met Lys Leu Val Gln Thr Arg Ala Ile Leu 65 70 75 80

Asn Tyr Ile Ala Ser Lys Tyr Asn Leu Tyr Gly Lys Asp Ile Lys Glu 85 90 95

Arg Ala Leu Ile Asp Met Tyr Ile Glu Gly Ile Ala Asp Leu Gly Glu 100 105 110

Met Ile Leu Leu Pro Val Cys Pro Pro Glu Glu Lys Asp Ala Lys 115 120 125

Leu Ala Leu Ile Lys Glu Lys Ile Lys Asn Arg Tyr Phe Pro Ala Phe 130 135 140

Leu Ser Arg Ala Asp Ile His Leu Val Glu Leu Leu Tyr Tyr Val Glu 165 170 175

Glu Leu Asp Ser Ser Leu Ile Ser Ser Phe Pro Leu Leu Lys Ala Leu 180 185 190

Lys Thr Arg Ile Ser Asn Leu Pro Thr Val Lys Lys Phe Leu Gln Pro 195 200 205

Gly Ser Pro Arg Lys Pro Pro Met Asp Glu Lys Ser Leu Glu Glu Ala 210 215 220

Arg Lys Ile Phe Arg Phe 225 230

<210> 1319 <211> 279 WO 00/55350

	2> P1		sapi	ens											
-22			Jupi												
	)> 1														
Glu 1	Gly	Pro	Ala	Glu 5	Gly	Asn	Met	Ala	Ala 10	Lys	Val	Phe	Glu	Ser 15	Ile
Gly	Lys	Phe	Gly 20	Leu	Ala	Leu	Ala	Val 25	Ala	Gly	Gly	Val	Val 30	Asn	Ser
Ala	Leu	Туг 35	Asn	Val	Asp	Ala	Gly 40	His	Arg	Ala	Val	Ile 45	Phe	Asp	Arg
Phe	Arg 50	Gly	Val	Gln	Asp	Ile 55	Val	Val	Gly	Glu	Gly 60	Thr	His	Phe	Leu
Ile 65	Pro	Trp	Val	Gln	<b>Lys</b> 70	Pro	Ile	Ile	Phe	Asp 75	Cys	Arg	Ser	Arg	Pro 80
Arg	Asn	Val	Pro	Val 85	Ile	Thr	Gly	Ser	Lys 90	Asp	Leu	Gln	Asn	Val 95	Asn
Ile	Thr	Leu	Arg 100	Ile	Leu	Phe	Arg	Pro 105	Val	Ala	Ser	Gln	Leu 110	Pro	Arg
Ile	Phe	Thr 115	Ser	Ile	Gly	Glu	Asp 120	Tyr	Asp	Glu	Arg	Val 125	Leu	Pro	Ser
Ile	Thr 130	Thr	Glu	Ile	Leu	Lys 135	Ser	Val	Val	Ala	Arg 140	Phe	Asp	Ala	Gly
Glu 145	Leu	Ile	Thr	Gln	Arg 150	Glu	Leu	Val	Ser	Arg 155	Gln	Val	Ser	Asp	Asp 160
Leu	Thr	Glu	Arg	Ala 165	Ala	Thr	Phe	Gly	Leu 170	Ile	Leu	Asp	Asp	Val 175	Ser
Leu	Thr	His	Leu 180	Thr	Phe	Gly	Lys	Glu 185	Phe	Thr	Glu	Ala	Val 190	Glu	Ala
Lys	Gln	Val 195	Ala	Gln	Gln	Glu	Ala 200	Glu	Arg	Ala	Arg	Phe 205	Val	Val	Glu
Lys	Ala 210	Glu.	Gln	Gln	Lys	Lys 215	Ala	Ala	Ile	Ile	Ser 220	Ala	Glu	Gly	Asp
Ser 225	Lys	Ala	Ala	Glu	Leu 230	Ile	Ala	Asn	Ser	Leu 235	Ala	Thr	Ala	Gly	Asp 240
Gly	Leu	Ile	Glu	Leu 245	Arg	Lys	Leu	Glu	Ala 250	Ala	Glu	Asp	Ile	Ala 255	Tyr

Gln Leu Ser Arg Ser Arg Asn Ile Thr Tyr Leu Pro Ala Gly Gln Ser 260 265 270

Val Leu Leu Gln Leu Pro Gln 275

<210> 1320

<211> 406

' <212> PRT

<213> Homo sapiens

<400> 1320

Val Thr Ala Cys Ala Ala Pro Ala Ala Trp Leu Pro Ile Leu Val Ala 1 5 10 15

Asp Ile Trp Ser Ser Tyr Asn Met Ala Asp Ile Asp Asn Lys Glu Gln
20 25 30

Ser Glu Leu Asp Gln Asp Leu Asp Asp Val Glu Glu Val Glu Glu Glu 35 40 45

Glu Thr Gly Glu Glu Thr Lys Leu Lys Ala Arg Gln Leu Thr Val Gln 50 60

Met Met Gln Asn Pro Gln Ile Leu Ala Ala Leu Gln Glu Arg Leu Asp 65 70 75. 80

Gly Leu Val Glu Thr Pro Thr Gly Tyr Ile Glu Ser Leu Pro Arg Val
85 90 95

Val Lys Arg Arg Val Asn Ala Leu Lys Asn Leu Gln Val Lys Cys Ala 100 105 110

Gln Ile Glu Ala Lys Phe Tyr Glu Glu Val His Asp Leu Glu Arg Lys 115 120 125

Tyr Ala Val Leu Tyr Gln Pro Leu Phe Asp Lys Arg Phe Glu Ile Ile 130 ... 135 140

Asn Ala Ile Tyr Glu Pro Thr Glu Glu Glu Cys Glu Trp Lys Pro Asp 145 150 155 160

Glu Glu Asp Glu Ile Ser Glu Glu Leu Lys Glu Lys Ala Lys Ile Glu 165 170 175

Asp Glu Lys Lys Asp Glu Glu Lys Glu Asp Pro Lys Gly Ile Pro Glu 180 185 190

Phe	Trp	Leu 195	Thr	Val	Phe	Lys	Asn 200	Val	Asp	Leu	Leu	Ser 205	Asp	Met	Val
Gln	Glu 210	His	Asp	Glu	Pro	Ile 215	Leu	Lys	His	Leu	Lys 220	Asp	Ile	Lys	Val
Lys 225	Phe	Ser	Asp	Ala	Gly 230	Gln	Pro	Met	Ser	Phe 235	Val	Leu	Glu	Phe	His 240
Phe	Glu	Pro	Asn	Glu 245	туr	Phe	Thr	Asn	Glu 250	Val	Lev	Thr	Lys	Thr 255	Tyr
Arg	Met	Arg	Ser 260	Glu	Pro	Asp	Asp	Ser 265	Asp	Pro	Phe	Ser	Phe 270	Asp	Gly
Pro	Glu	Ile 275	Met	Gly	Cys	Thr	Gly 280	Суѕ	Gln	Ile	Asp	Trp 285	Lys	Lys	Gly
ГÀЗ	Asn 290	Val	Thr	Leu	Lys	Thr 295	Ile	Lys	Lys	Lys	Gln 300	Lys	His	Lys	Gly
Arg 305	Gly	Thr	Val	Arg	Thr 310	Val	Thr	Lys	Thr	Val 315	Ser	Asn	Asp	Ser	Phe 320
Phe	Asn	Phe	Phe	Ala 325	Pro	Pro	Glu	Val	Pro 330	Glu	Ser	Gly	Asp	Leu 335	Asp
Asp	Asp	Ala	Glu 340	Ala	Ile	Leu	Ala	Ala 345	Asp	Phe	Glu	Ile	Gly 350	His	Phe
Leu	Arg	Glu 355	Arg	Ile	Ile	Pro	Arg 360	Ser	Val	Leu	Tyr	Phe 365	Thr	Gly	Ġlu
	370		Asp	Ĭ	_	375	-	-	-		380	Ī			
385		-	Tyr		390	Phe	Glu	Glu	Val	Lys 395	Ser	Cys	Ser	Lys	Leu 400
Phe	Gln	Arg	Trp	Leu	Gln										

<210> 1321 <211> 173 <212> PRT <213> Homo sapiens <220>

405

<221> SITE

<222> (55)

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Gln Ser Ala Cys Ser Leu Leu Pro Glu Met Pro Arg Ile Leu Thr Arg
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                                    10
Thr Pro Ser Ser Arg Met Ile Val Leu Arg Leu Met Pro Val Gly Gly
Arg Arg Pro Ile Val Thr Ser Phe Gly Gly Cys Ser Thr Ala Pro Arg
                             40
Ala Asn Phe Pro Leu Pro Xaa Pro Ala Leu Arg Gln Ser Arg Ser Lys
Met Ala Val Val Gly Val Ser Ser Val Ser Arg Leu Leu Gly Arg Ser
Arg Pro Gln Leu Gly Arg Pro Met Ser Ser Gly Ala His Gly Glu Glu
                 85
Gly Ser Ala Arg Met Trp Lys Thr Leu Thr Phe Phe Val Ala Leu Pro
                                105
Gly Val Ala Val Ser Met Leu Asn Val Tyr Leu Lys Ser His His Gly
                           120
Glu His Glu Arg Pro Glu Phe Ile Ala Tyr Pro His Leu Arg Ile Arg
    130
Thr Lys Pro Phe Pro Trp Gly Asp Gly Asn His Thr Leu Phe His Asn
Pro His Val Asn Pro Leu Pro Thr Gly Tyr Glu Asp Glu
                165
<210> 1322
<211> 209
<212> PRT
<213> Homo sapiens
<400> 1322
Lys Thr Gln Ala Ala Ser Val Glu Ala Val Lys Met Leu Asp Glu Ile
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Leu Leu Gln Leu Ser Ala Ser Val Pro Val Asp Val Met Pro Gly Glu

25

20

<223> Xaa equals any of the naturally occurring L-amino acids

1365

Phe Asp Pro Thr Asn Tyr Thr Leu Pro Gln Gln Pro Leu His Pro Cys 35 Met Phe Pro Leu Ala Thr Ala Tyr Ser Thr Leu Gln Leu Val Thr Asn 55 Pro Tyr Gln Ala Thr Ile Asp Gly Val Arg Phe Leu Gly Thr Ser Gly 75 Gln Asn Val Ser Asp Ile Phe Arg Tyr Ser Ser Met Glu Asp His Leu 85 Glu Ile Leu Glu Trp Thr Leu Arg Val Arg His Ile Ser Pro Thr Ala 105 Pro Asp Thr Leu Gly Cys Tyr Pro Phe Tyr Lys Thr Asp Pro Phe Ile 120 115 Phe Pro Glu Cys Pro His Val Tyr Phe Cys Gly Asn Thr Pro Ser Phe 135 Gly Ser Lys Ile Ile Arg Gly Pro Glu Asp Gln Thr Val Leu Leu Val 150 Thr Val Pro Asp Phe Ser Ala Thr Gln Thr Ala Cys Leu Val Asn Leu Arg Ser Leu Ala Cys Gln Pro Ile Ser Phe Ser Gly Phe Gly Ala Glu 185 Asp Asp Asp Leu Gly Gly Leu Gly Trp Ala Pro Asp Ser Lys Lys Trp 195 200 Phe <210> 1323 <211> 291 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (30) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE

<222> (57)

<22	3> :	Kaa e	equal	s ar	ny of	the	e nat	ural	lly (	occui	rring	L-a	mino	aci	ids
		1323													
Asn 1		n Val	l Ala	Thz		His	s Glu	Pro	) Ala 10		r Val	. Pro	Ala	Pro 15	
Gly	Asp	Leu	2 Leu 20		Gly	Ala	Glu	Pro 25		ı Gly	, Gly	Asn	Хаа 30		Arq
Arg	Pro	Pro 35	Gly	Ala	Arg	Glu	Gln 40		Glr	n Ser	Pro	Pro 45		Ala	Arg
Gly	Gly 50		Gly	Ser	Leu	Ala 55		Xaa	Ala	a Pro	Pro 60		Ser	Gly	Let
Ser 65	Cys	Pro	Gly	Cys	Phe 70		Leu	Arg	Leu	75		Leu	Arg	Leu	Ser 80
Glu	Arg	Asn	Met	Lys 85		Leu	Leu	Ala	Ala 90		Leu	Ile	Ala	Gly 95	
Val	Phe	Phe	Leu 100		Leu	Pro	Gly	Pro 105		Ala	Ala	Asp	Glu 110	Lys	Lys
Lys	Gly	Pro 115	Lys	Val	Thr	Val	Lys 120		Tyr	Phe	Asp	Leu 125	Arg	Ile	Gly
Asp	Glu 130		Val	Gly	Arg	Val 135		Phe	Gly	Leu	Phe 140	Gly	Lys	Thr	Val
Pro 145	Lys	Thr	Val	Asp	Asn 150	Phe	Val	Ala	Leu	Ala 155	Thr	Gly	Glu	Lys	Gly 160
Phe	Gly	Tyr	Lys	Asn 165	Ser	Lys	Phe	His	Arg 170		Ile	Lys	Asp	Phe 175	Met
Ile	Gln	Gly	Gly 180	Asp	Phe	Thr	Arg	Gly 185	Asp	Gly	Thr	Gly	Gly 190	Lys	Ser
Ile	Tyr	Gly 195	Glu	Arg	Phe	Pro	Asp 200	Glu	Asn	Phe	Lys	Leu 205	Lys	His	Tyr
Gly	Pro 210	Gly	Trp	Val	Ser	Met 215	Ala	Asn	Ala	Gly	Lys 220	Asp	Thr	Asn	Gly
Ser 225	Gln	Phe	Phe	Ile	Thr 230	Thr	Val	Lys	Thr	Ala 235	Trp	Leu	Asp	Gly	Lys 240
His	Val	Val	Phe	Gly 245	Lys	Val	Leu	Glu	Gly 250	Met	Glu	Val	Val	Arg 255	Lys

Val Glu Ser Thr Lys Thr Asp Ser Arg Asp Lys Pro Leu Lys Asp Val 260 265 270

Ile Ile Ala Asp Cys Gly Lys Ile Glu Val Glu Lys Pro Phe Ala Ile 275 280 285

Ala Lys Glu 290

<210> 1324

<211> 150

<212> PRT

<213> Homo sapiens

<400> 1324

Glu Cys Leu Val Arg Ser Lys Asn Ile Thr Gln Ile Val Gly His Ser 1 5 10 15

Gly Cys Glu Ala Lys Ser Ile Gln Asn Arg Ala Cys Leu Gly Gln Cys 20 25 30

Phe Ser Tyr Ser Val Pro Asn Thr Phe Pro Gln Ser Thr Glu Ser Leu  $35 \hspace{1.5cm} 40 \hspace{1.5cm} 45$ 

Val His Cys Asp Ser Cys Met Pro Ala Gln Ser Met Trp Glu Ile Val 50 55 60

Thr Leu Glu Cys Pro Gly His Glu Glu Val Pro Arg Val Asp Lys Leu 65 70 75 80

Val Glu Lys Ile Leu His Cys Ser Cys Gln Ala Cys Gly Lys Glu Pro 85 90 95

Ser His Glu Gly Leu Ser Val Tyr Val Gln Gly Glu Asp Gly Pro Gly
100 105 110

Ser Gln Pro Gly Thr His Pro His Pro His Pro His Pro His Pro Gly 115 120 125

Gly Gln Thr Pro Glu Pro Glu Asp Pro Pro Gly Ala Pro His Thr Glu 130 135 140

Glu Glu Gly Ala Glu Asp 145 150

<210> 1325 <211> 56

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<212> PRT
<213> Homo sapiens
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Glu Ile Asn Ile Ser Arg Lys Gly Glu Ser Arg Phe Tyr Lys Met Ser
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Gln Leu Ser Asn Ile Trp Gly Ser Asp Ser Phe Phe Val Arg Thr Phe
             20
                                 25
Glu Thr Ser Lys Gln Pro Leu Phe Leu Lys Asn Ser Gly Phe Thr Leu
                            40
Thr His Val Ser Phe Thr Pro Phe
     50
                         55
<210> 1326
<211> 486
<212> PRT
<213> Homo sapiens
<220>
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<221> SITE
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<220>
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<400> 1326
Arg Leu Pro Leu Gly Ser Arg Ser Pro Ser Glu Ala Ala Gly Ala Glu
Thr Ala Pro Ser Ser Leu Ser Ala Ala Met Thr Pro Leu Val Ser Arg
Leu Xaa Arg Leu Trp Ala Ile Met Arg Lys Pro Arg Ala Ala Val Gly
         35
                             40
                                                 45
Ser Gly His Arg Lys Gln Ala Ala Ser Gln Glu Gly Arg Gln Lys His
     50
                                             60 .
```

65	-7-				70		. Dys	110	, 361	75		, vař	, Gly	, re	80
Arg	Gln	Pro	Glu	Glu 85		Val	Leu	Gln	Ala 90		Val	Ser	Ser	Туг 95	
Leu	Phe	Arg	Asp 100		Ala	Glu	Val	Thr 105		Phe	Arg	Gly	Ser 110		Leu
Ser	Trp	Туг 115	Asp	Gln	Glu	Lys	Arg 120		Leu	Pro	Trp	Arg 125		Arg	Ala
	130					135					140				
145					150		Gln			155					160
				165			Pro		170					175	
			180				Leu	185					190		
		195					Gly 200					205			
	210					215	Ala				220				
225					230		Gly			235					240
				245			Gly		250					255	
			260				Pro	265					270		
		275					Leu 280					285			
	290					295	Leu				300				
305					310		Pro			315					320
Gln	Arg	Val	Glu	Gln 325	Glu	Gln	Leu	Leu	Ala 330	Ser	Gly	Ser	Leu	Ser 335	Gly

Ser Pro Asp Val Glu Glu Cys Ala Pro Asn Thr Gly Gln Cys His Leu  $340 \hspace{1.5cm} 345 \hspace{1.5cm} 350$ 

Cys Leu Pro Pro Ser Glu Pro Trp Asp Gln Thr Leu Gly Val Val Asn 355 360 365

Phe Pro Arg Lys Ala Ser Arg Lys Pro Pro Arg Glu Glu Ser Ser Ala 370 375 380

Thr Cys Val Leu Glu Gln Pro Gly Ala Leu Gly Ala Gln Ile Leu Leu 385 390 395 400

Val Gln Arg Pro Asn Ser Gly Leu Leu Ala Gly Leu Trp Glu Phe Pro 405 410 415

Ser Val Thr Trp Glu Pro Ser Glu Gln Leu Gln Arg Lys Ala Leu Leu 420 . 425 430

Gln Glu Leu Gln Arg Xaa Ala Gly Pro Leu Pro Ala Thr His Xaa Arg 435 440 445

His Leu Gly Glu Val Val His Thr Phe Ser His Ile Lys Leu Thr Tyr 450 455 460

Gln Val Tyr Gly Leu Ala Leu Glu Gly Gln Thr Pro Val Thr Thr Val 465 470 475 480

Pro Pro Gly Ala Arg Cys 485

<210> 1327

<211> 88

<212> PRT

<213> Homo sapiens

<400> 1327

Lys Thr Leu Phe Thr Tyr Ser Phe His Gly Tyr Asn Thr Leu Ala Asp 1 5 10 15

Phe Leu Leu Ala Leu Gly Ala Met Ile Leu Ile Thr Phe Cys Lys Val .20 25 30

Thr Asn Val Ile His Ser Thr Leu Cys Gly Ser His Leu Phe Arg Leu 35 40. 45

Met Cys Phe Gly Glu Arg Lys Lys Phe Leu Ala Glu Tyr Tyr Phe Glu 50 55 60

Leu Ser Arg Thr Leu Ser His Gln Arg Gln Phe Phe Ser Val Gln Phe

1371

65 70 75 80

Pro Ile Pro Asp Asn Leu Leu Lys 85

<210> 1328

<211> 424

<212> PRT

<213> Homo sapiens

<400> 1328

Ile Arg Val Ser Phe Met Asn Asn Gln Lys Gln Gln Lys Pro Thr Leu
1 5 10 15

Ser Gly Gln Arg Phe Lys Thr Arg Lys Arg Asp Glu Lys Glu Arg Phe

Asp Pro Thr Gln Phe Gln Asp Cys Ile Ile Gln Gly Leu Thr Glu Thr 35 40 45

Gly Thr Asp Leu Glu Ala Val Ala Lys Phe Leu Asp Ala Ser Gly Ala 50 55 60

Lys Leu Asp Tyr Arg Arg Tyr Ala Glu Thr Leu Phe Asp Ile Leu Val 65 70 75 80

Ala Gly Gly Met Leu Ala Pro Gly Gly Thr Leu Ala Asp Asp Met Met 85 90 95

Arg Thr Asp Val Cys Val Phe Ala Ala Gln Glu Asp Leu Glu Thr Met 100 105 110

Gln Ala Phe Ala Gln Val Phe Asn Lys Leu Ile Arg Arg Tyr Lys Tyr 115 120 125

Leu Glu Lys Gly Phe Glu Asp Glu Val Lys Lys Leu Leu Leu Phe Leu 130 135 140

Lys Gly Phe Ser Glu Ser Glu Arg Asn Lys Leu Ala Met Leu Thr Gly 145 150 155 160

Val Leu Leu Ala Asn Gly Thr Leu Asn Ala Ser Ile Leu Asn Ser Leu 165 170 175

Tyr Asn Glu Asn Leu Val Lys Glu Gly Val Ser Ala Ala Phe Ala Val 180 185 190

Lys Leu Phe Lys Ser Trp Ile Asn Glu Lys Asp Ile Asn Ala Val Ala 195 200 205

	210			•		215				9	220		. 010		
Pro 225	Ala	Asn	Lys	Gln	Ser 230	Val	Glu	His	Phe	Thr 235		Tyr	Phe	Thr	Glu 240
Ala	Gly	Leu	Lys	Glu 245	Leu	Ser	Glu	Tyr	Val 250		Asn		Gln	Thr 255	Ile
Gly	Ala	Arg	Lys 260		Leu	Gln	Lys	Glu 265	Leu	Gln	Glu	Gln	Met 270		Arg
Gly	Asp	Pro 275	Phe	Lys	Asp	Ile	Ile 280	Leu	Tyr	Val	Lys	Glu 285	Glu	Met	Lys
Lys	Asn 290	Asn	Ile	Pro	Glu	Pro 295	Val	Val	Ile	Gly	11e 300		Trp	Ser	Ser
Val 305	Met	Ser	Thr	Val	Glu 310	Trp	Asn	Lys	Lys	Glu 315	Glu	Leu	Val	Ala	Glu 320
Gln	Ala	Ile	Lys	His 325	Leu	Lys	Gln	Tyr	Ser 330	Pro	Leu	Leu	Ala	Ala 335	Phe
Thr	Thr	Gln	Gly 340	Gln	Ser	Glu	Leu	Thr 345	Leu	Leu	Leu	Lys	Ile 350	Gln	Glu
Tyr	Cys	Туг 355	Asp	Asn	Ile	His	Phe 360	Met	Lys	Ala	Phe	Gln 365	Lys	Ile	Val
Val	Leu 370	Phe	Tyr	Lys	Ala	Glu 375	Val	Leu	Ser	Glu	Glu 380	Pro	Ile	Leu	Lys
385					390					Lys 395					400
31n	Met	Lys	Lys	Phe 405	Val	Glu	Trp	Leu	Lys 410	Asn	Ala	Glu	Glu	Glu 415	Ser

Ala Ser Leu Arg Lys Val Ser Met Asp Asn Arg Leu Met Glu Leu Phe

<210> 1329 <211> 558 <212> PRT

<213> Homo sapiens

Glu Ser Glu Ala Glu Glu Gly Asp 420

<400> 1329

WO 00/55350

Trp Tyr Cys Ser Val Gly Leu Ala Ser Thr Ala Gly Glu Gln Ala Ala Ala Val Ala Ala Ala Phe Ser Leu His Pro Asp Tyr Ala Met Leu Gly 25 Phe Val Gly Arg Val Ala Ala Ala Pro Ala Ser Gly Ala Leu Arg Arg 35 40 Leu Thr Pro Ser Ala Ser Leu Pro Pro Ala Gln Leu Leu Arg Ala Ala Pro Thr Ala Val His Pro Val Arg Asp Tyr Ala Ala Gln Thr Ser Pro Ser Pro Lys Ala Gly Ala Ala Thr Gly Arg Ile Val Ala Val Ile 9.0 Gly Ala Val Val Asp Val Gln Phe Asp Glu Gly Leu Pro Pro Ile Leu Asn Ala Leu Glu Val Gln Gly Arg Glu Thr Arg Leu Val Leu Glu Val Ala Gln His Leu Gly Glu Ser Thr Val Arg Thr Ile Ala Met Asp Gly 135 Thr Glu Gly Leu Val Arg Gly Gln Lys Val Leu Asp Ser Gly Ala Pro 150 155 Ile Lys Ile Pro Val Gly Pro Glu Thr Leu Gly Arg Ile Met Asn Val 170 Ile Gly Glu Pro Ile Asp Glu Arg Gly Pro Ile Lys Thr Lys Gln Phe 180 Ala Pro Ile His Ala Glu Ala Pro Glu Phe Met Glu Met Ser Val Glu Gln Glu Ile Leu Val Thr Gly Ile Lys Val Val Asp Leu Leu Ala Pro Tyr Ala Lys Gly Gly Lys Ile Gly Leu Phe Gly Gly Ala Gly Val Gly 230 235 Lys Thr Val Leu Ile Met Glu Leu Ile Asn Asn Val Ala Lys Ala His 250 Gly Gly Tyr Ser Val Phe Ala Gly Val Gly Glu Arg Thr Arg Glu Gly 260 265

Asr	a Asg	275	туг Э	T His	Glu	ı Met	280		ı Ser	Gly	val	. Ile 285		Leu	Lys
Asp	290	Thr	Ser	Lys	val	. Ala 295		ı Val	Туг	Gly	Gln 300		. Asr	Glu	Pro ·
Pro 305	Gly	' Ala	Arg	, Ala	310		. Ala	Leu	Thr	Gly 315		Thr	Val	Ala	Glu 320
Tyr	Phe	Arg	Asp	325		Gly	Gln	Asp	Val .330		Leu	Phe	Ile	335	Asn
Ile	Phe	Arg	Phe	Thr	Gln	Ala	Gly	Ser 345		Val	Ser	Ala	Leu 350		Gly
Arg	Ile	Pro 355	Ser	Ala	Val	Gly	Tyr 360	Gln	Pro	Thr	Leu	Ala 365		Asp	Met
Gly	Thr 370	Met	Gln	Glu	Arg	Ile 375	Thr	Thr	Thr	Lys	Lys 380	Gly	Ser	Ile	Thr
Ser 385		Gln	Ala		Tyr 390		Pro	Ala	Asp	Asp 395	Leu	Thr	Asp	Pro	Ala 400
Pro	Ala	Thr	Thr	Phe 405	Ala	His	Leu	Asp	Ala 410	Thr	Thr	Val	Leu	Ser 415	Arg
Ala	Ile	Ala	Glu 420	Leu	Gly	Ile	Tyr	Pro 425	Ala	Val	Asp	Pro	Leu 430	Asp	Ser
Thr	Ser	Arg 435	Ile	Met	Asp	Pro	Asn 440		Val	Gly	Ser	Glu 445	His	туг	Asp
Val	Ala 450	Arg	Gly	Val	Gln	Lys 455	Ile	Leu	Gln	Asp	Tyr 460	Lys	Ser	Leu	Gln
Asp 465	Ile	Ile	Ala	Ile	Leu 470	Gly	Met	Asp	Glu	Leu 475	Ser	Glu	Glu	Asp	Lys 480
Leu	Thr	Val	Ser	Arg 485	Ala	Arg	Lys	Ile	Gln 490	Arg	Phe	Leu	Ser	Gln 495	Pro
Phe	Gln	Val	Ala 500	Glu	Val	Phe	Thr	Gly 505	His	Met	Gly	Lys	Leu 510	Val	Pro
Leu	Lys	Glu 515	Thr	Ile	Lys	Gly	Phe 520	Gln	Gln	Ile	Leu	Ala 525	Gly	Glu	туг
Asp	His	Leu	Pro	Glu	Gln	Ala	Phe	Tyr	Met	Val	Gly	Pro	Ile	Glu	Glu

535

540

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Ala Val Ala Lys Ala Asp Lys Leu Ala Glu Glu His Ser Ser
545
                    550
<210> 1330
<211> 134
<212> PRT
<213> Homo sapiens
<400> 1330
Thr Thr Pro Leu Ser Gln Ile Val Ala Arg Gly Leu Ile Ala Arg Gly
                                     10
Val Pro Gly Ala Ile Val Asn Val Ser Ser Gln Cys Ser Gln Arg Ala
                                 25
Val Thr Asn His Ser Val Tyr Cys Ser Thr Lys Gly Ala Leu Asp Met
Leu Thr Lys Val Met Ala Leu Glu Leu Gly Pro His Lys Ile Arg Val
                         55
Asn Ala Val Asn Pro Thr Val Val Met Thr Ser Met Gly Gln Ala Thr
                    70
                                        75
Trp Ser Asp Pro His Lys Ala Lys Thr Met Leu Asn Arg Ile Pro Leu
Gly Lys Phe Ala Glu Val Glu His Val Val Asn Ala Ile Leu Phe Leu
           100
Leu Ser Asp Arg Ser Gly Met Thr Thr Gly Ser Thr Leu Pro Val Glu
                          120
Gly Gly Phe Trp Ala Cys
    130
<210> 1331
<211> 188
<212> PRT
<213> Homo sapiens
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<221> SITE
<222> (135)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
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<221> SITE
<222> (137)
<223> Xaa equals any of the naturally occurring L-amino acids
Ile Arg His Glu Pro Ser Arg Cys Arg Ser Arg Thr Ala Ala Val Cys
Ser Pro Pro Pro Cys Pro Pro Trp Arg Arg Pro Arg Gly Pro Trp Thr
                                25
Ala Lys Ser Pro Pro Trp Pro Pro Ala Arg Pro Arg Trp Gln Trp Thr
Arg Ala Leu Asn Ser Thr Ala Ala Pro Pro Arg Ser Pro Pro Ala Pro
                         55
Cys Pro Cys Arg Pro Asn Ser Ala Arg Arg Lys Arg Arg Pro Pro Ala
Asn Cys Arg Ala Ser Ser Gly Trp Leu Ala Ala Trp Lys Pro Ser Arg
Thr Gly Pro Ala Ala Arg Pro Arg Arg Pro Val Pro Asp Thr Ser Phe
                               105
His Ser Ser Pro Val Gln Ala Ala Val His Phe Val Gly Tyr Lys Ile
       115
                        - 120
Asn His Gly Pro Ala Met Xaa Leu Xaa Phe Leu Leu Gln Leu Arg Leu
                        135
Gly Arg Gly Pro Gly Leu Pro Arg Glu Asn Val Leu Glu Thr Ala Pro
145
                   150
                                      155
Val Phe Leu Ala Trp Phe Ile Cys Pro Gly Ser Gly Ser Asp Ser Gly
               165
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Gly Ser Glu Thr Ser Val Ala Leu Ser Tyr Trp Gly

185

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<210> 1332
<211> 237
<212> PRT
<213> Homo sapiens
<220>
<221> SITE
<222> (5)
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<223> Xaa equals any of the naturally occurring L-amino acids

<400> 1332

Asp Asp Arg Arg Xaa Asp Ala Glu Ala Asp Lys Met Ala Ala Ala Ala 1 5 10 15

Val Gln Gly Gly Arg Ser Gly Gly Ser Gly Gly Cys Ser Gly Ala Gly
20 25 30

Gly Ala Ser Asn Cys Gly Thr Gly Ser Gly Arg Ser Gly Leu Leu Asp 35 40 45

Lys Trp Lys Ile Asp Asp Lys Pro Val Lys Ile Asp Lys Trp Asp Gly 50 55 60

Ser Ala Val Lys Asn Ser Leu Asp Asp Ser Ala Lys Lys Val Leu Leu 65 70 75 80

Glu Lys Tyr Lys Tyr Val Glu Asn Phe Gly Leu Ile Asp Gly Arg Leu 85 90 95

Thr Ile Cys Thr Ile Ser Cys Phe Phe Ala Ile Val Ala Leu Ile Trp
100 105 110

Asp Tyr Met His Pro Phe Pro Glu Ser Lys Pro Val Leu Ala Leu Cys 115 120 125

Val Ile Ser Tyr Phe Val Met Met Gly Ile Leu Thr Ile Tyr Thr Ser 130 135 140

Tyr Lys Glu Lys Ser Ile Phe Leu Val Ala His Arg Lys Asp Pro Thr 145 150 155 160

Gly Met Asp Pro Asp Asp Ile Trp Gln Leu Ser Ser Ser Leu Lys Arg 165 170 175

Phe Asp Asp Lys Tyr Thr Leu Lys Leu Thr Phe Ile Ser Gly Arg Thr 180 185 190

Lys Gln Gln Arg Glu Ala Glu Phe Thr Lys Ser Ile Ala Lys Phe Phe 195 200 205

Asp His Ser Gly Thr Leu Val Met Asp Ala Tyr Glu Pro Glu Ile Ser 210 220

Arg Leu His Asp Ser Leu Ala Ile Glu Arg Lys Ile Lys 225 230 235

<210> 1333

<211> 56

<212> PRT

<213> Homo sapiens

<400> 1333

Thr Thr Ala Asn Pro Leu Lys Thr Arg Gly Leu Ala Leu Val Ala Gln
1 5 10 15

Pro Lys Val Ala Leu Gln Ile Phe Glu Arg Ala Thr Ala Thr Phe Leu 20 25 30

Pro Ser Gln Leu Ser Leu Asp Phe Ser Glu Ser Gly Tyr Cys Tyr Pro
35 40 45

Asn Val Cys Leu Tyr Glu Cys Ile 50 55

<210> 1334

<211> 207

<212> PRT

<213> Homo sapiens

<400> 1334

Ser His Pro Ala Cys Ala Lys Val Glu Tyr Ala Tyr Ser Asp Asm Ser 1 5 10 15

Leu Asp Pro Asp Asp Glu Asp Ser Asp Tyr His Gln Glu Ala Tyr Lys 20 25 30

Glu Ser Tyr Lys Asp Arg Arg Arg Arg Ala His Thr Gln Ala Glu Gln 35 40 45

Lys Arg Arg Asp Ala Ile Lys Arg Gly Tyr Asp Asp Leu Gln Thr Ile 50 55 60

Val Pro Thr Cys Gln Gln Asp Phe Ser Ile Gly Ser Gln Lys Leu 65 70 75 80

Ser Lys Ala Ile Val Leu Gln Lys Thr Ile Asp Tyr Ile Gln Phe Leu  $85 \hspace{1.5cm} 90 \hspace{1.5cm} 95$ 

His Lys Glu Lys Lys Gln Glu Glu Glu Val Ser Thr Leu Arg Lys
100 105 110

Asp Val Thr Ala Leu Lys Ile Met Lys Val Asn Tyr Glu Gln Ile Val

Lys Ala His Gln Asp Asn Pro His Glu Gly Glu Asp Gln Val Ser Asp 130 135 140

G1 14	ln Va 15	al Ly	ys Pi	ne As	sn Va 15	1 PF 0	ne G]	in G	ly I	le Me 1	et As 55	sp Se	r Le	eu Ph	e Gln 160
Se	er Ph	ne As	n Al	la Se 16	r Il	e Se	r Va	l Al	.a Se	er Pi	ne Gl	n Gl	u Le	u Se	r Ala 5
Су	s Va	l Ph	ie Se 18	r Tr	p Il	e Gl	u Gl	u Hi 18	s Cy 5	's Ly	's Pr	o G1	n Th 19		u Arg
G1	u Il	e Va 19	1 II 5	e Gl	y Va∶	l Le	u Hi 20	s Gl 0	n Le	u Ly	s As	n Gl 20		u Ty:	r
<2:	10> 11> 12> :	1005 PRT	sap.	iens											
<40	00> :	1335													
	y Va		ı Glı	n Tyr	Val	. Val	Pro	Glu	1 Val		3 Asp	Leu	туг	Asn 15	Trp
Leu	Glu	ı Val	L G1u 20	Phe	. Asn	Pro	Leu	Lys 25	Leu	з Суя	5 Glu	Arg	Val		Lys
Val	. Leu	Asr 35	Trp	Val	Arg	Glu	Gln 40	Pro	Glu	Lys	Glu	Pro	Glu	Leu	Gln
Gln	Tyr 50	Val	Pro	Gln	Leu	Gln 55	Asn	Asn	Thr	Ile	Leu 60	Arg	Leu	Leu	Gln
Gln 65	Val	Ser	Gln	Ile	Tyr 70	Gln	Ser	Ile	Glu	Phe	Ser	Arg	Leu	Thr	Ser 80
Leu	Val	Pro	Phe	Val 85	Asp	Ala	Phe	Gln	Leu 90		Arg	Ala	Ile	Val 95	Asp
Ala	Ala	Arg	His 100	Сув	Asp	Leu	Gln	Val 105	Arg	Ile	Asp	His	Thr	Ser	Arg
Thr	Leu	Ser 115	Phe	Gly	Ser	Asp	Leu 120	Asn	Tyr	Ala	Thr	Arg 125	Glu	Asp	Ala
Pro	Ile 130	Gly	Pro	His	Leu	Gln 135	Ser	Met	Pro	Ser	Glu 140	Gln	Ile	Arg	Asn
Gln 145	Leu	Thr	Ala	Met	Ser 150	Ser	Val	Leu	Ala	Lys 155	Ala	Leu	Glu		Ile 160

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Lys	Pro	) Ala	His	165	. Leu	Gln	Glu	Lys	170		Gln	His	Glr	175	Ala
Val	Thr	Ala	180		Lys	Asn	Ser	Arg 185		Glu	His	Gln	Arg 190		Leu
Ala	Arg	Arg 195		Thr	Ile	Glu	Glu 200		Lys	Glu	Arg	Leu 205		Ser	Leu
Asn	Ile 210	Gln	Arg	Glu	Lys	Glu 215		Leu	Glu	Gln	Arg 220		Ala	G1u	Leu
225	٠				230					235					Lys 240
				245	-				250					255	
			260				Glu	265					270		-
		275					Asp 280					285			
	290					295	Gln				300				
305					310		Lys			315					320
				325			Glu		330					335	
			340				Asp	345					350		
		355					Gln 360					365			
	370					375	Met	•			380				
385					390		Gln			395					400
				405			Glu		410					415	
ary	ъys	wr d	420	ALG	гÀг	GIU	Glu	Arg 425	Arg	rie	rnr		Tyr 430	Arg	Glu

Lys	Glu	G1u 435	Glu	Glu	Gln	Arg	440		Glu	Glu	Gln	445		Lys	Glu
Arg	Glu 450		Arg	Glu	Arg	Ala 455		Arg	Ala	Lys	Arg 460		Glu	Glu	Leu
Arg 465		Tyr	Gln	Glu	Arg 470		Lys	Ĺys	Leu	Glu 475		Val	Glu	Arg	Lys 480
Lys	Arg	Gln	Arg	Glu 485		Glu	Ile	Glu	Glu 490		Glu	Arg	Arg	Arg 495	
Glu	Glu	Arg	Arg 500	Leu	Gly	Asp	Ser	Ser 505	Leu	Ser	Arg	Lys	Asp 510	Ser	Arg
		515	Arg				520					525			
	530		Trp			535					540				
545			Asp		550					555					560
			Gly	565					570					575	
			Val 580					585					590		-
		595	Glu				600					605			
	610		Trp			615					620				
625			Asp		630					635					640
			Gly	645					650					655	•
			Gly 660					665					670		·
		675	Ala				680					685			
Asp	Arg 690	GIÀ	Pro	Arg	Arg	Gly 695	Leu	Asp	Asp	Asp	<b>Arg</b> 700	Gly	Pro	Arg	Arg

Gly 705		. Asp	Asp	Asp	710		Pro	Arg	Arg	Gly 715	Met	. Asp	Asp	Asp	720
Gly	Pro	Arg	Arg	Gly 725		Asp	Asp	Asp	Arg 730		Pro	Arg	Arg	Gly 735	
Asp	Asp	Asp	Arg 740		Pro	Trp	Arg	Asn 745	Ala	Asp	Asp	Asp	Arg 750		Pro
Arg	Arg	Gly 755	Ala	Glu	Asp	Asp	Arg 760		Pro	Trp	Arg	Asn 765		Asp	Asp
Asp	Arg 770		Ser	Arg	Arg	Ala 775	Asp	Asp	Asp	Arg	Phe 780		Arg	Arg	Gly
Asp 785	Asp	Ser	Arg	Pro	Gly 790	Pro	Trp	Arg		Leu 795	Val	Lys	Pro	Gly	Gly 800
				805	-				810		Trp			815	
			820		-	-		825			Arg	-	830		
		835					840				Lys	845			
Glu	Arg 850	Asp	Arg	Glu	Arg	Asp 855	Val	Asp	Arg	Glu	Asp 860	Arg	Phe	Arg	Arg
865					870					875	Ala				880
Ser	Trp	Arg	Asp	Ser 885	Ser	Arg	Arg	Asp	Asp 890	Arg	Asp	Arg	Asp	Asp 895	Arg
			900					905			Glu		910		
		915					920				Arg	925			
	930					935					Ly <u>s</u> 940				
945					950					955	Pro.				960
Asp	Arg	Glu	Arg	Asp 965	Arg	Asp	Arg	Glu	Arg 970	Glu	Gly	Glu	Lys	Glu 975	Lys

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Ala Ser Trp Arg Ala Glu Lys Asp Arg Glu Ser Leu Arg Arg Thr Lys
            980
Asn Glu Thr Asp Glu Asp Gly Trp Thr Thr Val Arg Arg
                           1000
<210> 1336
<211> 231
<212> PRT
<213> Homo sapiens
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<221> SITE
<222> (52)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (64)
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<221> SITE
<222> (83)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (118)
<223> Xaa equals any of the naturally occurring L-amino acids
Ala Gly Ile His Pro Met Asn Ser Ile Ser Ser Leu Asp Arg Thr Arg
                                     10
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Met Met Thr Pro Phe Met Gly Ile Ser Pro Leu Pro Gly Gly Glu Arg 20 25 30

Phe Pro Tyr Pro Ser Phe His Trp Asp Pro Ile Arg Asp Pro Leu Arg 35 40 45

Asp Pro Tyr Xaa Glu Leu Asp Ile His Arg Arg Asp Pro Leu Gly Xaa 50 60

Asp Phe Leu Leu Arg Asn Asp Pro Xaa His Arg Leu Ser Thr Xaa Arg 65 70 75 80

Leu Xaa Xaa Ala Asp Arg Ser Phe Arg Asp Arg Glu Pro His Asp Tyr 85 90 95

Ser His His His His His His His Pro Leu Ser Val Asp Pro Arg

Arg Glu His Glu Arg Xaa Gly His Leu Asp Glu Arg Glu Arg Leu His 115 120 125

Met Leu Arg Glu Asp Tyr Glu His Thr Arg Leu His Ser Val His Pro 130 135 140

Ala Ser Leu Asp Gly His Leu Pro His Pro Ser Leu Ile Thr Pro Gly 145 150 150 160

Leu Pro Ser Met His Tyr Pro Arg Ile Ser Pro Thr Ala Gly Asn Gln 165 - 170 175

As Gly Leu Leu As Lys Thr Pro Pro Thr Ala Ala Leu Ser Ala Pro 180 185 190

Pro Pro Leu Ile Ser Thr Leu Gly Gly Arg Pro Val Ser Pro Arg Arg 195 200 205

Thr Thr Pro Leu Ser Ala Glu Ile Arg Glu Arg Pro Pro Ser His Thr 210 215 220

Leu Lys Asp Ile Glu Ala Arg 225 230

<210> 1337

<211> 155

<212> PRT

<213> Homo sapiens

<400> 1337

1385

Gly Val Glu Gly Leu Lys Asp Ala Gln Met Arg Asp Leu Leu Ser Pro

1 5 Pro Thr Asp Asn Arg Pro Gly Gln Met Asp Asn Arg Ser Lys Leu Arg Asn Ile Val Glu Leu Arg Leu Ala Gly Leu Asp Ile Thr Asp Ala Ser Leu Arg Leu Ile Ile Arg His Met Pro Leu Leu Ser Lys Leu His Leu 55 Ser Tyr Cys Asn His Val Thr Asp Gln Ser Ile Asn Leu Leu Thr Ala Val Gly Thr Thr Arg Asp Ser Leu Thr Glu Ile Asn Leu Ser Asp 90 Cys Asn Lys Val Thr Asp Gln Cys Leu Ser Phe Phe Lys Arg Cys Gly Asn Ile Cys His Ile Asp Leu Arg Tyr Cys Lys Gln Val Thr Lys Glu 115 120 125 Gly Cys Glu Gln Phe Ile Ala Glu Met Ser Val Ser Val Gln Phe Gly 135 Gln Val Glu Glu Lys Leu Leu Gln Lys Leu Ser 150 <210> 1338 <211> 328 <212> PRT <213> Homo sapiens <400> 1338 Asn Asn Ser Gly Val Met Pro Glu Met Pro Glu Asp Met Glu Gln Glu Glu Val Asn Ile Pro Asn Arg Arg Val Leu Val Thr Gly Ala Thr Gly 25 Leu Leu Gly Arg Ala Val His Lys Glu Phe Gln Gln Asn Asn Trp His Ala Val Gly Cys Gly Phe Arg Arg Ala Arg Pro Lys Phe Glu Gln Val 50 55 60 Asn Leu Leu Asp Ser Asn Ala Val His His Ile Ile His Asp Phe Gln

65					70					75	•				80
Pro	His	Val	Ile	Val 85	His	Cys	Ala	Ala	Glu 90		Arg	, Pro	Asp	Val 95	
Glu	Asn	Gln	Pro		Ala	Ala	Ser	Gln 105		Asn	Val	Asp	Ala 110		Gly
Asn	Leu	Ala 115		Glu	Ala	Ala	Ala 120		Gly	Ala	Phe	Leu 125		Tyr	Ile
Ser	Ser 130		Tyr	Val	Phe	Asp 135		Thr	Asn	Pro	Pro 140		Arg	Glu	Glu
Asp 145	Ile	Pro	Ala	Pro	Leu 150	Asn	Leu	Туг	.Gly	Lys 155		Lys	Leu	Asp	Gly 160
Glu	Lys	Ala	Val	Leu 165	Glu	Asn	Asn	Leu	Gly 170		Ala	Val	Leu	Arg 175	
Pro	Ile	Leu	Туг 180	Gly	Glu	Val	Glu	Lys 185	Leu	Glu	Glu	Ser	Ala 190	Val	Thr
Val	Met	Phe 195	Asp	Lys	Val	Gln	Phe 200	Ser	Asn	Lys	Ser	Ala 205	Asn	Met	Asp
His	Trp 210	Gln	Gln	Arg	Phe	Pro 215	Thr	His	Val	Lys	Asp 220	Val	Ala	Thr	Val
Cys 225	Arg	Gln	Leu	Ala	Glu 230	Lys	Arg	Met	Leu	Asp 235	Pro	Ser	Ile	Lys	Gly 240
Thr	Phe	His	Trp	Ser 245	Gly	Asn	Glu	Gln	Met 250	Thr	Lys	Tyr	Glu	Met 255	Ala
Cys	Ala	Ile	Ala 260	Asp	Ala	Phe	Asn	Leu 265	Pro	Ser	ser	His	Leu 270	Arg	Pro
Ile	Thr	Asp 275	Ser	Pro	Val	Leu	Gly 280	Ala	Gln	Arg	Pro	Arg 285	Asn	Ala	Gln
	Asp 290	Cys	Ser	Lys	Leu	Glu 295	Thr	Leu	Gly	Ile	Gly 300	Gln	Arg	Thr	Pro
Phe . 305	Arg	Ile	Gly	Ile	Lys 310	Glu	Ser	Leu	Trp	Pro 315	Phe	Leu	Ile	Asp	Lys 320
Arg '	Trp	Arg		Thr 325	Val	Phe	His								

1387

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<213> Homo sapiens
<220>
<221> SITE
<222> (2)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 1339
Leu Xaa His Pro Phe Ala Val Thr Ser Tyr Gly Lys Asn Leu Tyr Phe
Thr Asp Trp Lys Met Asn Ser Val Val Ala Leu Asp Leu Ala Ile Ser
             20
                                25
Lys Glu Thr Asp Ala Phe Gln Pro His Lys Gln Thr Arg Leu Tyr Gly
                             40
Ile Thr Thr Ala Leu Ser Gln Cys Pro Gln Ala Ile Thr Thr Ala Gln
                         55
<210> 1340
<211> 155
<212> PRT
<213> Homo sapiens
<400> 1340
Arg Lys Met Ala Val Glu Ser Arg Val Thr Gln Glu Glu Ile Lys Lys
Glu Pro Glu Lys Pro Ile Asp Arg Glu Lys Thr Cys Pro Leu Leu
             20
                                25
```

Arg Val Phe Thr Thr Asn Asn Gly Arg His His Arg Met Asp Glu Phe

Ser Arg Gly Asn Val Pro Ser Ser Glu Leu Gln Ile Tyr Thr Trp Met

Asp Ala Thr Leu Lys Glu Leu Thr Ser Leu Val Lys Glu Val Tyr Pro

Glu Ala Arg Lys Lys Gly Thr His Phe Asn Phe Ala Ile Val Phe Thr

60

75

55

70

50

<210> 1339 <211> 64 <212> PRT

1388

85 90 95 Asp Val Lys Arg Pro Gly Tyr Arg Val Lys Glu Ile Gly Ser Thr Met-100 105 Ser Gly Arg Lys Gly Thr Asp Asp Ser Met Thr Leu Gln Ser Gln Lys Phe Gln Ile Gly Asp Tyr Leu Asp Ile Ala Ile Thr Pro Pro Asn Arg 135 Ala Pro Pro Pro Ser Gly Arg Met Arg Pro Tyr 145 150 <210> 1341 <211> 72 <212> PRT <213> Homo sapiens <400> 1341 Ala Gln Leu Pro Ser Ser Phe Leu Arg His Arg Gly Val Phe Leu 1 5 . . . . . 10 Thr Pro Leu Leu Ala Met Ser Ser His Lys Thr Phe Arg Ile Lys Arg 25 Phe Leu Ala Lys Lys Gln Lys Gln Asn Arg Pro Ile Pro Gln Trp Ile 35 -40 Arg Met Lys Thr Gly Asn Lys Ile Arg Tyr Asn Ser Lys Arg Arg His Trp Arg Arg Thr Lys Leu Gly Leu 65 70 <210> 1342 <211> 270 <212> PRT <213> Homo sapiens Leu Lys Val Ala Gln Thr Asp Gly Val Asn Val Asp Met His Leu Lys 5 Gln Ile Glu Ile Lys Lys Phe Lys Tyr Gly Ile Glu Glu His Gly Lys 20

1389

Val Lys Met Arg Gly Gly Leu Leu Arg Thr Tyr Ile Ile Ser Ile Leu 40 Phe Lys Ser Ile Phe Glu Val Ala Phe Leu Leu Ile Gln Trp Tyr Ile Tyr Gly Phe Ser Leu Ser Ala Val Tyr Thr Cys Lys Arg Asp Pro Cys Pro His Gln Val Asp Cys Phe Leu Ser Arg Pro Thr Glu Lys Thr Ile 85 Phe Ile Ile Phe Met Leu Val Val Ser Leu Val Ser Leu Ala Leu Asn 105 Ile Ile Glu Leu Phe Tyr Val Phe Phe Lys Gly Val Lys Asp Arg Val Lys Gly Lys Ser Asp Pro Tyr His Ala Thr Ser Gly Ala Leu Ser Pro 135 Ala Lys Asp Cys Gly Ser Gln Lys Tyr Ala Tyr Phe Asn Gly Cys Ser 150 Ser Pro Thr Ala Pro Leu Ser Pro Met Ser Pro Pro Gly Tyr Lys Leu 170 Val Thr Gly Asp Arg Asn Asn Ser Ser Cys Arg Asn Tyr Asn Lys Gln 185 Ala Ser Glu Gln Asn Trp Ala Asn Tyr Ser Ala Glu Gln Asn Arg Met Gly Gln Ala Gly Ser Thr Ile Ser Asn Ser His Ala Gln Pro Phe Asp Phe Pro Asp Asp Asn Gln Asn Ser Lys Lys Leu Ala Ala Gly His Glu 230 Leu Gln Pro Leu Ala Ile Val Asp Gln Arg Pro Ser Ser Arg Ala Ser 250 Ser Arg Ala Ser Ser Arg Pro Arg Pro Asp Asp Leu Glu Ile

265

<210> 1343

<211> 94

<212> PRT

<213> Homo sapiens

<220>

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<221> SITE
<222> (55)
<223> Xaa equals any of the naturally occurring L-amino acids
Gln Glu Leu Arg Ser Pro Ser Arg Ser Pro Ser Pro Pro Pro Lys Ser
                                    10
Pro Pro Trp Thr Thr Gly Gly Ser Leu Cys Glu Gln Leu Ala Phe Arg
                                25
Lys Pro Leu Ser Val Phe Lys Gln Lys Val Glu Gly Ala Thr Lys Gln
                             40
                                        . 45
Ala Ala Val Arg Ala Ser Xaa Cys Arg Pro Leu Pro Cys Ser Ser Ser
                         55
Ser Phe Ala Ser Ala Ser Ser Val Met Phe Cys Leu Glu Phe Tyr Leu
 65
                                        75
Asp Phe Phe Ser Gly Tyr Phe Ser Val Phe Gln Pro Leu Leu
<210> 1344
<211> 125
<212> PRT
<213> Homo sapiens
<220>
<221> SITE
<222> (118)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (122)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (123)
<223> Xaa equals any of the naturally occurring L-amino acids
Tyr Ser Thr Arg Ala Leu Trp Lys Pro Asn His Val His Val Cys Val
                                   10
```

1391

Cys Val Cys Ala Ser Phe Glu Pro Pro Ser Thr Ala Ala Ser Ser His 20 25 30 30

Asp Thr Lys Leu Leu Ile Ser Thr Phe Leu Trp Val Ala Gln Gly Leu 35 40 45

Ile Ala Ser His Ser Ile Thr Arg Ile Glu Ala Arg His Gly Gly Ala 50 55 60

Cys Leu Val Val Pro Ala Lys Leu Gly Arg Leu Glu Gly Arg Glu Gly 65 70 75 80

Ser Leu Trp Ser Pro Gly Arg Leu Glu Gly Trp Gln Trp Ser His Gly 85 90 95

Ser Gly Gly His Trp His Phe Gln Pro Gly Gly Gly Arg Val Glu Thr  $100 \hspace{1cm} 105 \hspace{1cm} 101 \hspace{1cm}$ 

Phe Val Leu Gln Lys Xaa Lys Lys Lys Xaa Xaa Gly Gly 115 120 120

<210> 1345 <211> 131 <212> PRT <213> Homo sapiens

<400> 1345
Pro Arg Val Arg Arg Leu Arg Glu Asp Asp Arg Arg Gly Phe Leu Ser
1 5 10 15

Phe Arg Ala Asp Ser Ala His Ala Ser Met Val Asn Val Pro Lys Thr 20 25 30

Arg Arg Thr Phe Cys Lys Lys Cys Gly Lys His Gln Pro His Lys Val 35 40 45

Thr Gln Tyr Lys Lys Gly Lys Asp Ser Leu Tyr Ala Gln Gly Lys Arg

Arg Tyr Asp Arg Lys Gln Ser Gly Tyr Gly Gly Gln Thr Lys Pro Ile 65 70 75 80

Phe Arg Lys Lys Ala Lys Thr Thr Lys Lys Ile Val Leu Arg Leu Glu 85 90 95

Cys Val Glu Pro Asn Cys Arg Ser Lys Arg Met Leu Ala Ile Lys Arg 100 105 110

Cys Lys His Phe Glu Leu Gly Gly Asp Lys Lys Arg Lys Gly Gln Val

1392

115 120 125 Ile Gln Phe 130 <210> 1346 <211> 75 <212> PRT <213> Homo sapiens <400> 1346 Asn Lys Arg Asn Cys Lys Phe Pro Leu Leu Lys Ile Thr Lys Ile Thr 5 10 15 Glu Thr Lys Glu Glu Ile Arg Ile Trp Gly Ile Val Leu Asn Asn Leu 25 Val Val Lys Lys Asn Asn Cys Ala Cys Leu Asp Leu Asn Lys Pro Pro Ser Lys Cys Glu Gly Ser Ser Asn Phe Ser Lys His Met Lys Val Leu Ile His Phe Asp Lys Gly Pro Leu Lys Lys Ser 70 <210> 1347 <211> 413 <212> PRT <213> Homo sapiens <400> 1347 Gly Val Ala Arg Ala Gln Pro Val Pro Ala Val Leu Ser Trp Leu Leu 1 5 10 Ala Leu Leu Arg Cys Ala Ala Thr Met Leu Ser Leu Arg Val Pro Leu 20 25 Ala Pro Ile Thr Asp Pro Gln Gln Leu Gln Leu Ser Pro Leu Lys Gly 40 Leu Ser Leu Val Asp Lys Glu Asn Thr Pro Pro Ala Leu Ser Gly Thr 50 Arg Val Leu Ala Ser Lys Thr Ala Arg Arg Ile Phe Gln Glu Pro Thr

65

70

Glu	Pro	Lys	Thr	Lys 85	Ala	Ala	Ala	Pro	Gly 90	Val	Glu	Asp	Glu	Pro 95	Leu
Leu	Arg	Glu	Asn 100	Pro	Arg	Arg	Phe	Val 105	Ile	Phe	Pro	Ile	Glu 110	Tyr	His
Asp	Ile	Trp 115	Gln	Met	Tyr	Lys	Lys 120	Ala	Glu	Ala	Ser	Phe 125	Trp	Thr	Ala
Glu	Glu 130	Val	Asp	Leu	Ser	Lys 135	Asp	Ile	Gln	His	тгр́ 140	Glu	Ser	Leu	Lys
Pro 145	Glu	Glu	Arg	Туr	Phe 150	Ile	Ser	His	Val	Leu 155	Ala	Phe	Phe	Ala	Ala 160
Ser	Asp	Gly	Ile	Val 165	Asn	Glu	Asn	Leu	Val 170	Glu	Arg	Phe	Ser	Gln 175	Glu
Val	Gln	Ile	Thr 180	Glu	Ala	Arg	Cys	Phe 185	туr	Gly	Phe	Gln	Ile 190	Ala	Met
Glu	Asn	Ile 195	His	Ser	Glu	Met	Туг 200	Ser	Leu	Leu	Ile	Asp 205	Thr	Tyr	Ile
Lys	Asp 210	Pro	Lys	Glu	Arg	Glu 215	Phe	Leu	Phe	Asn	Ala 220	Ile	Glu	Thr	Met
Pro 225	Cys	Val	Lys	Lys	Lys 230	Ala	Asp	Trp	Ala	Leu 235	Arg	Trp	Ile	Gly	Asp 240
Lys	Glu	Ala	Thr	туг 245	Gly	Glu	Arg	Val	Val 250	Ala	Phe	Ala	Ala	Val 255	G1u
Gly	Ile	Phe	Phe 260	Ser	Gly	Ser	Phe	Ala 265	Ser	Ile	Phe	Trp	Leu 270	Lys	Lys
Arg	Gly	Leu 275	Met	Pro	Gly	Leu	Thr 280	Phe	Ser	Asn	Glu	Leu 285	Ile	Ser	Arg
Asp	Glu 290	Gly	Leu	His	Cys	Asp 295	Phe	Ala	Cys	Leu	Met 300	Phe	Lys	His	Leu
Val 305	His	Lys	Pro	Ser	Glu 310	Glu	Arg	Val	Arg	Glu 315	Ile	Ile	Ile	Asn	Ala 320
Val	Arg	Ile	Glu	Gln 325	Glu	Phe	Leu	Thr	Glu 330	Ala	Leu	Pro	Val	Lys 335	Leu
Ile	Gly	Met	Asn 340	Cys	Thr	Leu	Met	Lys 345	Gln	Tyr	Ile	Glu	Phe 350	Val	Ala

Asp Arg Leu Met Leu Glu Leu Gly Phe Ser Lys Val Phe Arg Val Glu 355 360 365

Asn Pro Phe Asp Phe Met Glu Asn Ile Ser Leu Glu Gly Lys Thr Asn 370 375 380

Phe Phe Glu Lys Arg Val Gly Glu Tyr Gln Arg Met Gly Val Met Ser 385 390 395 400

Ser Pro Thr Glu Asn Ser Phe Thr Leu Asp Ala Asp Phe
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<210> 1348

<211> 243

<212> PRT

<213> Homo sapiens

<400> 1348

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Ile Leu Arg Lys Lys Gly Ile Leu Pro Pro Lys Glu Ser Leu Lys Glu
20 25 30

Leu Glu Glu Glu Glu Glu Glu Gln Arg Ile Leu Gln Gln Ser Val 35 40 45

Val Lys Thr Tyr Glu Asp Met Thr Leu Glu Glu Leu Glu Asp His Glu
50 55 60

Asp Glu Phe Asn Glu Glu Asp Glu Arg Ala Ile Glu Met Tyr Arg Arg 65 70 75 80

Arg Arg Leu Ala Glu Trp Lys Ala Thr Lys Leu Lys Asn Lys Phe Gly 85 90 95

Glu Val Leu Glu Ile Ser Gly Lys Asp Tyr Val Gln Glu Val Thr Lys 100 105 110

Ala Gly Glu Gly Leu Trp Val Ile Leu His Leu Tyr Lys Gln Gly Ile 115 120 125

Pro Leu Cys Ala Leu Ile Asn Gln His Leu Ser Gly Leu Ala Arg Lys 130 135 140

Phe Pro Asp Val Lys Phe Ile Lys Ala Ile Ser Thr Thr Cys Ile Pro 145 150 155 160

Asn Tyr Pro Asp Arg Asn Leu Pro Thr Ile Phe Val Tyr Leu Glu Gly

WO 00/55350

165

1395

170

175

Asp Ile Lys Ala Gln Phe Ile Gly Pro Leu Val Phe Gly Gly Met Asn 180 185 Leu Thr Arg Asp Glu Leu Glu Trp Lys Leu Ser Glu Ser Gly Ala Ile 200 Met Thr Asp Leu Glu Glu Asn Pro Lys Lys Pro Ile Glu Asp Val Leu 215 Leu Ser Ser Val Arg Arg Ser Val Leu Met Lys Arg Asp Ser Asp Ser 225 230 235 Glu Gly Asp <210> 1349 <211> 326 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (137) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (142) <223> Xaa equals any of the naturally occurring L-amino acids <400> 1349 Arg Met Ala Thr Pro Leu Pro Pro Pro Ser Pro Arg His Leu Arg Leu 10 Leu Arg Leu Leu Ser Gly Leu Val Leu Gly Ala Ala Leu Arg Gly 20 Ala Ala Ala Gly His Pro Asp Val Ala Ala Cys Pro Gly Ser Leu Asp Cys Ala Leu Lys Arg Arg Ala Arg Cys Pro Pro Gly Ala His Ala Cys Gly Pro Cys Leu Gln Pro Phe Gln Glu Asp Gln Gln Gly Leu Cys Val Pro Arg Met Arg Arg Pro Pro Gly Gly Gly Arg Pro Gln Pro Arg Leu

				85					90	ı				95	
Glu	Asp	Glu	Ile 100		Phe	Leu	Ala	Gln 105		Leu	Ala	Arg	Lys 110	Glu	Se
Gly	His	Ser 115		. Pro	Pro	Leu	Pro 120	Lys	Asp	Arg	Gln	Arg 125		Pro	Gli
Pro	Ala 130		Leu	Gly	Phe	Ser 135	Ala	Xaa	Gly	Gln	Gly 140		Xaa	Leu	Gly
Leu 145		Ser	Thr	Pro	Gly 150		Pro	Thr	Pro	Thr 155		His	Thr	Ser.	Leu 160
Gly.	Ser	Pro	Val	. Ser 165	. Ser	. Asp	Pro	Val	His 170		Ser	Pro	Leu	Glu 175	Pro
Arg	Gly	Gly	Gln 180	Gly	Asp	Gly	Leu	Ala 185	Leu	-Val	Leu	Ile	Leu 190	Ala	Phe
Cys	Val	Ala 195	Gly	Ala	Ala	Ala	Leu 200	Ser	Val	Ala	Ser	Leu 205	Cys	Trp	Cys
Arg	Leu 210	Gln	Arg	Glu.	Ile	Arg 215	Leu	Thr	Gln	Lys	Ala 220	Asp	туr	Ala	Thr
Ala 225	Lys	Ala	Pro	Gly	Ser 230	Pro	Ala	Ala	Pro	Arg 235	Ile	Ser	Pro.	Gly:	Asp 240
Gln	Arg	Leu	Ala	Gln 245	Ser	Ala	Glu	Met	туr 250	His	Tyr	Gln	His	G1n 255	Arg
Gln	Gln	Met	Leu 260	Cys	Leu	Glu	Arg	His 265	Lys	Glu	Pro	Pro	Lys 270	Glu	Leu
Asp	Thr	Ala 275	Ser	Ser	Asp.	Glu	Glu 280	Asn	Glu	Asp	Gly	Asp 285	Phe	Thr	Val
туr	Glu 290	Cys	Pro	Gly	Leu	Ala 295	Pro	Thr	Gly	Glu	Met 300	Glu	Val	Arg	Asn
Pro 305	Leu -	Phe	Asp	His	Ala 310	Ala	Leu	Ser	Ala	Pro 315	Leu	Pro	Ala	Pro	Ser 320
Ser	Pro	Pro	Ala	Leu	Pro										

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Leu His Thr Ser Leu Thr Leu Asn Ile Phe His Trp Ile Leu Asp Arg
                                25
Ala Lys Gly Arg Thr Gly Ala Ser Gly Gly Pro Trp Leu Phe Lys Ser
                            40
Trp Ile Ile Cys Asp Ser Asn His Lys Phe Leu Ala Asn Phe
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Leu Ser Ser Leu Ala Val Tyr Ala Glu Asp Ser Glu Pro Glu Ser Asp
Gly Glu Ala Gly Ile Glu Ala Val Gly Ser Ala Ala Glu Glu Lys Gly
                            40
Gly Leu Val Ser Asp Ala Tyr Gly Glu Asp Asp Phe Ser Arg Leu Gly
     50
Gly Asp Glu Asp Gly Tyr Glu Glu Glu Glu Asp Glu Asn Ser Arg Gln
Ser Glu Asp Asp Ser Glu Thr Glu Lys Pro Glu Ala Asp Asp Pro
Lys Asp Asn Thr Glu Ala Glu Lys Arg Asp Pro Gln Glu Leu Val Ala
            100
                               105
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Ser Phe Ser Glu Arg Val Arg Asn Met Ser Pro Asp Glu Ile Lys Ile

		115					120					125			
Pro	Pro 130		Pro	Pro	Gly	Arg 135		Ser	Asn	His	Leu 140		Asp	Lys	Ile
Gln 145	Lys	Leu	Tyr	Glu	Arg 150		Ile	Lys	Glu	Gly 155		Asp	Met	Asn	Туг 160
Ile	Ile	Gln	Arg	Lys 165	Lys	Glu	Phe	Arg	Asn 170	Pro	Ser	Ile	Tyr	Glu 175	Lys
Leu	Ile	Gln	Phe 180	Cys	Ala	Ile	Asp	Glu 185		Gly	Thr	Asn	Tyr 190	Pro	Lys
Asp	Met	Phe 195	Asp	Pro	His	Gly	Trp 200	Ser	Glu	Asp	Ser	Tyr 205	Tyr	Glu	Ala
Leu	Ala 210	Lys	Ala	Gln	Lys	Ile 215	Glu	Met	Asp	Lys	Leu 220	Glu	Lys	Ala	Ĺys
Lys 225	Glu	Arg	Thr	Lys	11e 230	Glu	Phe	Val	Thr	Gly 235	Thr	Lys	Lys	Gly	Thr 240
Thr	Thr	Asn	Ala	Thr 245	Ser	Thr	Thr	Thr	Thr 250	Thr	Ala	Ser	Thr	Ala 255	Val
Ala	Asp	Ala	Gln 260	Lys	Arg	Lys	Ser	Lys 265		Asp	Ser	Ala	Ile 270	Pro	Val
Thr	Thr	Ile 275	Ser	Pro	Ala	His	His 280	Pro	His	His	His	Ser 285	His	Pro	Ala
Ser	Cys 290	Cys	His	Gly	His	His 295	Gln	Arg	Gln	Xaa	Ser 300	Lys	Asp	His	Arg
His 305	Leu	Cys	Cys	Gly	Ala 310	Pro	Leu	•					; · · 2		
<210	> 13	52													
<211	> 25	9 .										. :			
	> PR														
<213	> Ho	mo s	apie	ns											
<220	>						-			*					
	> SI	TE	•												
<222	> (7	)													
<223	> Xa	a eq	uals	any	of	the	natu	rall	у ос	curr	ing :	L-am	ino	acid	s
<400	> 13	52	-												

Leu 1	Leu	Asp	Ser	Leu 5	Lys	Xaa	Asp	Tyr	Ala 10	Gly	Lys	Pro	Gln	Pro 15	Pro
Ile	Lys	Ser	Glu 20	Arg	Arg	Asn	Pro	Pro 25	Ser	Tyr	Ala	Met	Ala 30	Gly	Lys
Lys	Val	Leu 35	Ile	Val	Tyr	Ala	His 40	Gln	Glu	Pro	Lys	Ser 45	Phe	Asn	Gly
Ser	Leu 50	Lys	Asn	Val	Ala	Val 55	Asp	Glu	Leu	Ser	Arg 60	Gln	Gly	Cys	Thr
Val 65	Thr	Val	Ser	Asp	Leu 70	Tyr	Ala	Met	Asn	Phe 75	Glu	Pro	Arg	Ala	Thr 80
Asp	Lys	Asp	Ile	Thr 85	Gly	Thr	Leu	Ser	Asn 90	Pro	Glu	Val	Phe	Asn 95	Tyr
Gly	Val	Glu	Thr 100	His	Glu	Ala	Tyr	Lys 105	Gln	Arg	Ser	Leu	Ala 110	Ser	Asp
Ile	Thr	Asp 115	Glu	Gln	Lys	Lys	Val 120	Arg	Glu	Ala	Asp	Leu 125	Val	Ile	Phe
Gln	Phe 130	Pro	Leu	туr	Trp	Phe 135	Ser	Val	Pro	Ala	11e 140	Leu	Lys	Gly	Trp
Met 145	Asp	Arg	Val	Leu	Cys 150	Gln	Gly	Phe	Ala	Phe 155	Asp	Ile	Pro	Gly	Phe 160
Tyr	Asp	Ser	Gly	Leu 165	Leu	Gln	Gly	Lys	Leu 170	Ala	Leu	Leu	Ser	Val 175	Thr
Thr	Gly	Gly	Thr 180	Ala	Glu	Met	Tyr	Thr 185	Lys	Thr	Gly	Vаl	Asn 190	Gly	Asp
Ser	Arg	Туг 195	Phe	Leu	Trp	Pro	Leu 200	Gln	His	Gly	Thr	Leu 205	His	Phe	Cys
Gly	Phe 210	Lys	Val	Leu	Ala	Pro 215	Gln	Ile	Ser	Phe	Ala 220	Pro	Glu	Ile	Ala
Ser 225	Glu	Glu	Glu	Arg	Lys 230	Gly	Met	Val	Ala	Ala 235	Trp	Ser	Gln	Arg	Leu 240
Gln	Thr	Ile	Trp	Lys 245	Glu	Glu	Pro	Ile	Pro 250	Cys	Thr	Ala	His	Trp 255	His
Phe	Gly	Gln													

<210> 1353 <211> 72 <212> PRT <213> Homo sapiens

<400> 1353

Asp Leu Ala Ser Glu Glu His Phe Phe Ser Val Lys Phe Leu Tyr Leu 1 5 10 15

Lys Ile Gln Lys Tyr Phe Arg Ile Leu Leu Ile Leu Ser Pro Val Phe 20 25 30

Thr Ser Phe Trp Lys Thr Cys Ile Thr Met Ser Leu Glu Lys Gly Gln 35 40 45

Arg Lys Ala Phe His Val Lys Ile Arg Ser Leu Ala Ile Ser Asn Pro 50 55 60

Val Leu Phe Ser Leu His Phe Phe 65 70

<210> 1354 <211> 301 <212> PRT <213> Homo sapiens

<400> 1354

Lys Arg Arg Arg Leu Glu Gln Arg Gln Gln Pro Asp Glu Gln Arg 1 5 10 15

Arg Arg Ser Gly Ala Met Val Lys Met Ala Ala Ala Gly Gly Gly 20 25 30

Gly Gly Gly Arg Tyr Tyr Gly Gly Gly Ser Glu Gly Gly Arg Ala Pro 35 40 45

Lys Arg Leu Lys Thr Asp Asn Ala Gly Asp Gln His Gly Gly Gly 50 \$55\$

Gly Gly Gly Gly Gly Ala Gly Ala Gly Gly Gly Gly Gly Gly Glu 65 70 75 80

Asn Tyr Asp Asp Pro His Lys Thr Pro Ala Ser Pro Val Val His Ile 85 90 95

Arg Gly Leu Ile Asp Gly Val Val Glu Ala Asp Leu Val Glu Ala Leu
- 100 105 110

1401

Gln Glu Phe Gly Pro Ile Ser Tyr Val Val Val Met Pro Lys Lys Arg 120 Gln Ala Leu Val Glu Phe Glu Asp Val Leu Gly Ala Cys Asn Ala Val 135 Asn Tyr Ala Ala Asp Asn Gln Ile Tyr Ile Ala Gly His Pro Ala Phe Val Asn Tyr Ser Thr Ser Gln Lys Ile Ser Arg Pro Gly Asp Ser Asp 170 Asp Ser Arg Ser Val Asn Ser Val Leu Leu Phe Thr Ile Leu Asn Pro 180 Ile Tyr Ser Ile Thr Thr Asp Val Leu Tyr Thr Ile Cys Asn Pro Cys 200 Gly Pro Val Gln Arq Ile Val Ile Phe Arg Lys Asn Gly Val Gln Ala Met Val Glu Phe Asp Ser Val Gln Ser Ala Gln Arg Ala Lys Ala Ser Leu Asn Gly Ala Asp Ile Tyr Ser Gly Cys Cys Thr Leu Lys Ile Glu Tyr Ala Lys Pro Thr Arg Leu Asn Val Phe Lys Asn Asp Gln Asp Thr 260 265 Trp Asp Tyr Thr Asn Pro Asn Leu Ser Gly Gln Gly Asn Leu Asp Asp 280 His Phe Val Leu Asn Ile Pro Ala Leu Leu Ser Leu Asp 290 295 <210> 1355 <211> 466 <212> PRT <213> Homo sapiens Asn Thr Val Met Gly Arg Lys Lys Lys Gln Leu Lys Pro Trp Cys Trp Tyr Cys Asn Arg Asp Phe Asp Asp Glu Lys Ile Leu Ile Gln His 25

Gln	Lys	35		His	Phe	Lys	Cys 40		Ile	Cys	His	Lys 45		Leu	Tyr
Thr	Gly 50		Gly	Leu	Ala	Ile 55		Cys	Met	Gln	Val 60		Lys	Glu	Thr
Ile 65		Ala	Val	Pro	Asn 70	Ala	Ile	Pro	Gly	Arg 75	Thr	Asp	Ile	Glu	Leu 80
Glu	Ile	Tyr	Gly	Met 85		.Gly	Ile	Pro	Glu 90		Asp	Met	Asp	Glu 95	Arg
Arg	Arg	Leu	Leu 100		Gln	Lys	Thr	Gln 105	Glu	Ser	Gln	: Lys	Lys 110	Lys	Gln
Gln	Asp	Asp 115	Ser	Asp	Glu	Tyr	Asp 120		Asp	Asp	Ser	Ala 125	Ala	Ser	Thr
Ser	Phe 130	Gln	Pro	Gln	Pro	Val 135	Gln	Pro	Gln	Gln	Gly 140	Tyr	Ile	Pro	Pro
Met 145	Ala	Gln	Pro	Gly	Leu 150	Pro	Pro	Val	Pro	Gly 155	Ala	Pro	Gly	Met	Pro 160
Pro	Gly	Ile	Pro	Pro 165	Leu	Met	Pro	Gly	Val 170	Pro	Pro	Leu	Met	Pro 175	Gly
Met	Pro	Pro	Val 180	Met	Pro	Gly	Met	Pro 185	Pro	Gly	Leu	His	His 190	Gln	Arg ;
Lys	Tyr	Thr 195	Gln	Ser	Phe	Cys	Gly 200	Glu	Asn	Ile	Met	Met 205	Pro	Met	Ġly
Gly	Met 210	Met	Pro	Pro	Gly	Pro 215	Gly	Ile	Pro	Pro	Leu 22 <b>0</b>	Met	Pro	Gly	Met
Pro 225	Pro	Gly	Met	Pro	Pro 230	Pro	Val	Pro	Arg	Pro 235	Gly	Ile	Pro	Pro	Met 240
Thr	Gln	Ala	Gln	Ala 245	Val	Ser	Ala	Pro	Gly 250	Ile	Leu	Asn	Arg	Pro 255	Pro
Ala	Pro	Thr	Ala 260	Thr	Val	Pro		Pro 265	Gln	Pro	Pro	Val	Thr 270	Lys	Pro
Leu	Phe	Pro 275	Ser	Ala	Gly		Ala 280	Gln	Ala	Ala		Gln 285	Gly	Pro	Val
Gly	Thr 290	Asp	Phe	Lys		Leu 295	Asn	Ser	Thr	Pro	Ala 300	Thr	Thr	Thr	Glu

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Pro Pro Lys Pro Thr Phe Pro Ala Tyr Thr Gln Ser Thr Ala Ser Thr
305
                   310
Thr Ser Thr Thr Asn Ser Thr Ala Ala Lys Pro Ala Ala Ser Ile Thr
                                  330
Ser Lys Pro Ala Thr Leu Thr Thr Ser Ala Thr Ser Lys Leu Ile
                               345
His Pro Asp Glu Asp Ile Ser Leu Glu Glu Arg Arg Ala Gln Leu Pro
Lys Tyr Gln Arg Asn Leu Pro Arg Pro Gly Gln Ala Pro Ile Gly Asn
                       375
Pro Pro Val Gly Pro Ile Gly Gly Met Met Pro Pro Gln Pro Gly Ile
385
Pro Gln Gln Gly Met Arg Pro Pro Met Pro Pro His Gly Gln Tyr
                                   410
                405
Gly Gly His His Gln Gly Met Pro Gly Tyr Leu Pro Gly Ala Met Pro
                             425
Pro Tyr Gly Gln Gly Pro Pro Met Val Pro Pro Tyr Gln Gly Gly Pro
Pro Arg Pro Pro Met Gly Met Arg Pro Pro Val Met Ser Gln Gly Gly
                       455
Arg Tyr
465
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Leu Thr Asn Leu Ser Phe Thr Pro Cys Gly Pro Cys Tyr Trp Tyr Thr
                                25
             2.0
Gln Tyr Val Leu Thr Glu Asp Met Asp Phe Ile Cys Ser Ser Ala Gly
         35
                             40
Ile Gly Lys Leu Asp Leu Phe Ser Met Ile Gln Asn Ser Pro Ile Arg
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`50	5	5	60	
Arg Leu Glu L	ys Glu Glu Le 70	u Tyr Ser Ser	Leu Cys Ty:	r Phe Leu Leu 8(
Pro Phe Leu P	he Leu 85			
e de la	· · · · · · · · · · · · · · · · · · ·			
<210> 1357 <211> 580 <212> PRT	. If			· -
<213> Homo sap				• _
<220> <221> SITE		,		
<222> (3) - <223> Xaa equa	als any of the		ccurring L-a	mino acids
<220> <221> SITE				• • •
<222> (526) <223> Xaa equa	als any of the	e naturally o	ccurring L-a	mino acids
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Trp Thr Leu Le 2	eù Asp Pro Thi 20	Gln Arg Asn 25	Leu Tyr Arg	Asp Val Met
Leu Glu Asn Ty 35	yr Lys Asn Lei	Ala Thr Val	Gly Tyr Gln 45	•
Pro Ser Leu Il	le Ser Trp Leu 55		Glu Ser Arg 60	Thr Val Gln
Arg Gly Asp Ph 65	ne Gln Ala Ser 70	Glu Trp Lys	Val Gln Leu 75	Lys Thr Lys
Glu Leu Ala Le	eu Gln Gln Asp 85	Val Leu Gly	Glu Pro Thr	95
Ile Gln Met Il		* -		-
Gln Cys Gly As	p Val Ser Ser	Glu His Ser 120	Cys Leu Lys 125	Thr His Val
Arg Thr Gln As	n Ser Glu Asn	Thr Phe Glu	Cys Tyr Leu	Tyr Gly Val

	130					135					140				
Asp 145	Phe	Leu	Thr	Leu	His 150	Lys	Lys	Thr	Ser	Thr 155	Gly	Glu	Gln	Arg	Ser 160
Val	Phe	Ser	Gln	Cys 165	Gly	Lys	Ala	Phe	Ser 170	Leu	Asn	Pro	Asp	Val 175	Val
Cys	Gln	Arg	Thr 180	Cys	Thr	Gly	Glu	Lys 185	Ala	Phe	Asp	Cys	Ser 190	Asp	Ser
Gly	Lys	Ser 195	Phe	Ile	Asn	His	Ser 200	His	Leu	Gln	Gly	His 205	Leu	Arg	Thr
His	Asn 210	Gly	Glu	Ser	Leu	Ніs 215	Glu	Trp	Lys	Glu	Cys 220	Gly	Arg	Gly	Phe
Ile 225	His	Ser	Thr	Asp	Leu 230	Ala	Val	Arg	Ile	Gln 235	Thr	His	Arg	Ser	Glu 240
Lys	Pro	Tyr	Lys	Cys 245	Lys	Glu	Cys	Gly	Lys 250	Gly	Phe	Arg	Tyr	Ser 255	Ala
Tyr	Leu	Asn	11e 260	His	Met	Gly	Thr	His 265	Thr	Gly	Asp	Asn	Pro 270	Tyr	Glu
Cys	Lys	Glu 275	Cys	Gly	Lys	Ala	Phe 280	Thr	Arg	Ser	Cys	Gln 285	Leu	Thr	Gln
	290					295	Glu				300				
Gly 305	Arg	Ala	Phe	Thr	Val 310	Ser	Ser	Cys	Leu	Ser 315	Gln	His	Met	Lys	Ile 320
His	Val	Gly	Glu	Lys 325	Pro	туr	Glu	Cys	Lys 330	Glu	Cys	Gly	Ile	Ala 335	Phe
Thr	Arg	Ser	Ser 340	Gln	Leu	Thr	Glu	His 345	Leu	Lys	Thr	His	Thr 350	Ala	Lys
Asp	Pro	Phe 355	Glu	Cys	Lys	Ile	Cys 360	Gly	Lys	Ser	Phe	Arg 365	Asn	Ser	Ser
Суз	Leu 370		Asp	His	Phe	Arg 375	Ile	His	Thr	Gly	Ile 380	Lys	Pro	Туr	Lys
Cys 385		Asp	Cys	Gly	Lys 390	Ala	Phe	Thr	Gln	Asn 395	Ser	Asp	Leu	Thr	Lys 400
Hie	A1 =	Ara	Thr	Hie	Ser	Glv	Glu	Ara	Pro	Tvr	Glu	Cys	Lys	Glu	Cys

405 410 415 Gly Lys Ala Phe Ala Arg Ser Ser Arg Leu Ser Glu His Thr Arg Thr 420 425 His Thr Gly Glu Lys Pro Phe Glu Cys Val Lys Cys Gly Lys Ala Phe 440 Ala Ile Ser Ser Asn Leu Ser Gly His Leu Arg Ile His Thr Gly Glu 455 Lys Pro Phe Glu Cys Leu Glu Cys Gly Lys Ala Phe Thr His Ser Ser 465 470 475 Ser Leu Asn Asn His Met Arg Thr His Ser Ala Lys Lys Pro Phe Thr 490 Cys Met Glu Cys Gly Lys Ala Phe Lys Phe Pro Thr Cys Val Asn Leu 500 505 His Met Arg Ile His Thr Gly Glu Lys Pro Tyr Lys Cys Xaa Gln Cys 515 520 Gly Lys Ser Phe Ser Tyr Ser Asn Ser Phe Gln Leu His Glu Arg Thr 535 His Thr Gly Glu Lys Pro Tyr Glu Cys Lys Glu Cys Gly Lys Ala Phe 545 550 Ser Ser Ser Ser Phe Arg Asn His Glu Arg Arg His Ala Asp Glu 570 565 Arg Leu Ser Ala 580 <210> 1358 <211> 612 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (134) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (445)

<223> Xaa equals any of the naturally occurring L-amino acids

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Arg	Thr	Ala 35	Phe	Gly	Gly	Arg	Arg 40	Ala	Val	Pro	Pro	Asn 45	Asn	Ser	Asn
Ala	Ala 50	Glu	Asp	Asp	Leu	Pro 55	Thr	Val	Glu	Leu	Gln 60	Gly	Val	Val	Pro
65					Gln 70					75					80
Glu	Arg	Glu	Glu	Tyr 85	Val	Leu	Asn	Asp	Ile 90	Gly	Val	Ile	Phe	Tyr 95	Gly
			100		Lys			105					110		
Asp	Gly	Ile 115	Leu	Asp	Thr	Cys	Leu 120	Tyr	Val	Met	Asp	Arg 125	Ala	Gln	Met
	130				Xaa	135					140				
Ala 145	Met	Val	Asn	Ala	Lys 150	Asp	Asp	Glu	Gly	Val 155	Leu	Val	Gly	Ser	Trp 160
Asp	Asn	Ile	туг	Ala 165	Tyr	Gly	Val	Pro	Pro 170		Ala	Trp	Thr	Gly 175	Ser
Val	Asp	Ile	Leu 180	Leu	Glu	туг	Arg	Ser 185		Glu	Asn	Pro	Val 190	Arg	Туг
Gly	Gln	Cys 195		Val	Phe	Ala	Gly 200		Phe	Asn	Thr	Phe 205		Arg	Суя
Leu	Gly 210		Pro	Ala	Arg	11e 215		Thr	Asn	Tyr	Phe 220		Ala	His	Asp
Asn 225		Ala	Asn	Leu	Gln 230	Met	Asp	Ile	Phe	Leu 235	Glu	Glu	Asp	Gly	240
Val	Asn	Ser	Lys	Leu 245	Thr	Lys	Asp	Ser	Val 250	Trp	Asn	Tyr	His	Cys 255	Tr
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Trp	Gln	Ala 275	Val	Asp	Ser	Thr	Pro 280		Glu	Asn	Ser	Asp 285		Met	туг
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Phe 305		Phe	Asp	Ala	Pro 310		Val	Phe	Ala	Glu 315		Asn	Ser	Asp	1eu
Ile	Tyr	Ile	Thr	Ala 325		Lys	Asp	Gly	Thr 330		Val	Val	Glu	Asn 335	
Asp	Ala	Thr	His 340		Gly	Lys	Leu	Ile 345		Thr	Lys	Gln	Ile 350		Gly
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Glu	Glu 370	Glu	Arg	Leu	Ala	Leu 375		Thr	Ala	Leu	Met 380	-	Gly	Ala	Lys
Lys 385	Pro	Leu	Asn	Thr	Glu 390	Gly	Val	Met	Lys	Ser 395	Arg	Ser	Asn	Val	Asp 400
Met	Asp	Phe	Glu	Val 405	Glu	Asn				Gly		Asp	Phe	Lys 415	Leu
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WO 00/55350

1411

PCT/US00/05882

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	-		Glv	Glu	T.vs	Met	Ala	Aso	Asp	Pro	Ser	Ala	Ala	Asp	Ara
1	O.	OI,	017	5	2,5				10					15	,
-				,											
	*** 1	c1	T10	m	T	т1.	Lys	T	7 011	T10	Tue	Sar	T Au	Glu	<b>د</b> ۱ ۵
ASI	Val	GIU		TIP	Lys	116	Lys	25	rea	116	шуз	261	30	Giu	AIG
			20					25					30		
								_	_	_			_	_	_
Ala	Arg	Gly	Asn	Gly	Thr	Ser	Met	Ile	Ser	Leu	Ile		Pro	Pro	Lys
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Asp	Gln	Ile	Ser	Arg	Val	Ala	Lys	Met	Leu	Ala	Asp	Glu	Phe	Gly	Thr
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Tle	Thr	Ser	Val	Gln	Gln	Ara	Leu	Lvs	Leu	Tyr	Asn	Lys	Val	Pro	Pro
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N c n	C10	Len	Val	17 a 1	Tur	Cve	Gly	Thr	Tle	Va 1	Thr	Glu	Glu	Glv	Lvs
ASII	Gry	Leu	100	Val	I y I	Cys	GI,	105		• • • •			110	1	-,,
			100					103					110		
		_		_		_				<b>D.</b> .	•	<b>D</b>	T1 -		m b
Glu	Lys		Val	Asn	IIe	Asp	Phe	Glu	Pro	Pne	rys		TTE	ASI	The
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											_		_		
ser		Tyr	Leu	Cys	Asp		Lys	Phe	His	Thr		Ala	Leu	Thr	Ala
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Lvs	Phe	Thr	Val	Asp	Leu	Pro	Lys	Lvs	His	Glv	Arq	Glv	Gly	Gln	Ser
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n 1 -	F 011	2	Dhe	λla	Ara	T an	Arg	Mat	Glu	T.vs	Ara	His	Asn	Tvr	Val
Ald	Leu	195	FILE	тта	Arg	Leu	200	1.16.6	Olu	<b>2</b>	•••	205		- , -	
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Arg			Ala	Glu	Thr		Val	GIN	Leu	Pne		Ser	GIA	ASP	ьys
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1413

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Ile	Leu 130	Val	. Ile	Thi	туг	Gl <sub>3</sub>		Se:	: Ile	e Ala	Phe 140		Ser	Ala	Val
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His Ser Phe Ser Gln Thr Pro Ser Ala Ser Phe His Gly Ala Gly Gly
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Leu Arg Phe Ala Ser Pro Gly Pro Gly Ala Gly Arg Ala Arg Asp Ser
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Gln Arg Lys Trp Arg Arg Leu Arg Ala Arg Pro Leu Leu Gly Pro Gly
Gln Gly Trp Ser Trp Ala Gly Ile Pro Ser Ser Ala Ala Ala Gln Arg
Ala Gly Pro Pro Ala Gly Ala Leu Glu Ala Leu Ser Pro Gly Gly Ala
Arg Ala His Ala Glu Arg Arg Gly Glu Met Arg Ala Thr Pro Leu Ala
65
                    70
                                        75
Ala Pro Ala Gly Ser Leu Ser Arg Lys Lys Arg Leu Glu Leu Asp Asp
                                    90
Asn Leu Asp Thr Glu Arg Pro Val Gln Lys Arg Ala Arg Ser Gly Pro
                               105
Gln Pro Arg Leu Pro Pro Cys Leu Leu Pro Leu Ser Pro Pro Thr Ala
                           120
Pro Asp Arg Ala Thr Ala Val Xaa Thr Xaa Ser Arg Xaa Xaa Xaa Tyr
                       135
                                           140
Val Leu Leu Glu Ala Arg Arg Xaa Ala
145
                  150
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Se	r As	p As:	n Xa		r Ası 5	n Gly	у Суз	s Gly	/ Lei		ı Sei	: Xaa	a Gl	y Ası	n Thr
Va:	l Th:	r Pro	o Va 20	l Ası D	n Val	L Asr	n Glu	Val 25		s Pro	o Ile	e Ası	1 Ly:		y Glu
Glu	a Gla	1 Ile 35	e Gly	/ Phe	e Glu	ı Lev	ı Val 40		Lys	Leu	Phe	Glr 45		y Glr	1 Leu
Val	. Let 50	ı Arç	Thi	Arg	g Cys	Leu 55		Cys	Glu	Ser	Leu 60		Glu	ı Arç	, Arg
Glu 65	ı Asp	Phe	Glr	Asp	Ile 70	Ser	· Val	Pro	· Val	Gln 75		Asp	Glu	ı Leu	Ser 80
Lys	Val	. Glu	Glu	Ser 85	Ser	Glu	Ile	Ser	Pro 90		Pro	Lys	Thr	G1u 95	
Lys	Thr	Leu	Arg	Trp	Ala	Ile	Ser	Gln 105	Phe	Ala	Ser	Val	Glu 110		Ile
Val	Gly	Glu 115	Asp	Lys	туr	Phe	Cys 120	Glu	Asn	Cys	His	His 125	Tyr	Thr	Glu
Ala	Glu 130	Arg	Ser	Leu	Leu	Phe 135	Asp	Lys	Met	Pro	Glu 140	Val	Ile	Thr	Ile
His 145	Leu	Lys	Cys	Phe	Ala 150	Ala	Ser	Gly	Leu	Glu 155	Phe	Asp	Cys	Tyr	Gly 160
Gly	Gly	Leu	Ser	Lys 165	Ile	Asn	Thr	Pro	Leu 170	Leu	Thr	Pro	Leu	Lys 175	Leu
Ser	Leu	Glu	Glu 180	Trp	Ser	Thr	Lys	Pro 185	Thr	Asn	Asp	Ser	Tyr 190	Gly	Leu
Phe	Ala	Val 195	Val	Met	His	Ser	Gly 200	Ile	Thr	Ile	Ser	Ser 205	Gly	His	Tyr
Thr	Ala 210	Ser	Val	Lys	Val	Thr 215	Asp	Leu	Asn	Ser	Leu 220	Glu	Leu	Asp	Lys
Gly 225	Asn	Phe	Val	Val	Asp 230	Gln	Met	Cys	Glu	Ile 235	Gly	Lys ·	Pro	Glu	Pro 240
Leu	Asn	Glu	Glu	Glu 245	Ala	Arg	Gly		Val 25 <b>0</b>	Glu	Asn	Tyr	Asn	Asp 255	Glu
Glu	.Val	Ser	Ile	Arg	Val	Gly	Gly	Asn	Thr	Gln	Pro	Ser	Lvs	Val	T.eu

1425

260 265 270 Asn Lys Lys Asn Val Glu Ala Ile Gly Leu Leu Gly Gly Gln Lys Ser 275 280 Lys Ala Asp Tyr Glu Leu Tyr Asn Lys Ala Ser Asn Pro Asp Lys Val 295 Ala Ser Thr Ala Phe Ala Glu Asn Arg Asn Ser Glu Thr Ser Asp Thr 310. 315 Thr Gly Thr His Glu Ser Asp Arg Asn Lys Glu Ser Ser Asp Gln Thr 325 330 Gly Ile Asn Ile Ser Gly Phe Glu Asn Lys Ile Ser Tyr Val Val Gln 345 Ser Leu Lys Glu Tyr Glu Gly Lys Trp Leu Leu Phe Asp Asp Ser Glu Val Lys Val Thr Glu Glu Lys Asp Phe Leu Asn Ser Leu Ser Pro Ser 375 Thr Ser Pro Thr Ser Thr Pro Tyr Leu Leu Phe Tyr Lys Lys Leu 390 <210> 1369 <211> 260 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (3) <223> Xaa equals any of the naturally occurring L-amino acids Val Phe Xaa Ser Phe Phe Ala Glu Lys Glu Gln Gln Glu Ala Ile Glu His Ile Asp Glu Val Gln Asn Glu Ile Asp Arg Leu Asn Glu Gln Ala 25 Ser Glu Glu Ile Leu Lys Val Glu Gln Lys Tyr Asn Lys Leu Arg Gln Pro Phe Phe Gln Lys Arg Ser Glu Leu Ile Ala Lys Ile Pro Asn Phe

Trp	Val	Thr	Thr	Phe	Val	Asn	His	Pro	Gln	Val	Ser	Ala	Leu	Leu	Gly
65					70					75					80

Glu Glu Asp Glu Glu Ala Leu His Tyr Leu Thr Arg Val Glu Val Thr 85 90 95

Glu Phe Glu Asp Ile Lys Ser Gly Tyr Arg Ile Asp Phe Tyr Phe Asp 100 105 110

Glu Asn Pro Tyr Phe Glu Asn Lys Val Leu Ser Lys Glu Phe His Leu 115 120 125

Asn Glu Ser Gly Asp Pro Ser Ser Lys Ser Thr Glu Ile Lys Trp Lys 130 135 140

Ser Gly Lys Asp Leu Thr Lys Arg Ser Ser Gln Thr Gln Asn Lys Ala 145 150 155 160

Ser Arg Lys Arg Gln His Glu Glu Pro Glu Ser Phe Phe Thr Trp Phe 165 170 175

Thr Asp His Ser Asp Ala Gly Ala Asp Glu Leu Gly Glu Val Ile Lys 180 185 190

Asp Asp Ile Trp Pro Asn Pro Leu Gln Tyr Tyr Leu Val Pro Asp Met 195 200 205

Asp Asp Glu Glu Gly Glu Gly Glu Glu Asp Asp Asp Asp Glu Glu 210 215 220

Glu Glu Gly Leu Glu Asp Ile Asp Glu Glu Gly Asp Glu Asp Glu Gly 225 230 235 240

Glu Glu Asp Glu Asp Asp Asp Glu Gly Glu Glu Glu Glu Glu Asp Glu

245 250 255

Gly Glu Asp Asp 260

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<212> PRT

<213> Homo sapiens

<400> 1370

Lys Gly Glu Ala Ala Ala Phe Ser Ala Thr Phe Pro Ile Ala Arg Gln
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Glu Phe Leu Ser Val Thr Thr Ile Ala Val Met Ser Gly Arg Gly Lys

1427

			20					25					30		
Gln	Gly	Gly 35	Lys	Ala	Arg	Ala	Lys 40	Ala	Lys	Ser	Arg	Ser 45	Ser	Arg	Ala
Gly	Leu 50	Gln	Phe	Pro	Val	Gly 55	Glu	Cys	Ile	Ala	Leu 60	Arg	Lys	Gly	Asn
Tyr 65	Ala	Glu	Arg	Val	Gly 70	Ala	Gly	Ala	Pro	Val 75	Tyr	Met	Ala	Ala	Val 80
Leu	Glu	Tyr	Leu	Thr 85	Ala	Glu	Ile	Leu	Glu 90	Leu	Ala	Gly	Asn	Ala 95	Ala
Arg	Asp	Asn	Lys 100	Lys	Thr	Arg	Ile	Ile 105	Pro	Arg	His	Leu	Gln 110	Leu	Ala
Ile	Arg	Asn 115	Asp	Glu	Glu	Leu	Asn 120	Lys	Leu	Leu	Gly	Lys 125	Val	Thr	Ile
Ala	Gln 130	Gly	Gly	Val	Leu	Pro 135	Asn	Ile	Gln	Ala	Val 140	Leu	Leu	Pro	Lys
Lys 145	Thr	Glu	Ser	His	His 150	Lys	Ala	Lys	Gly	Lys 155					
<210	)> 13	371													
<211	l> 14	0													
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<213	3> H	omo s	sapie	ns											
-400	)> 13	77													
			Ara	Thr	His	Ala	Leu	Cvs	Ara	Glv	Ala	Ala	Ser	Ara	Glv
1		,		5				-75	10	1				15	,
Leu	Leu	Суз	Lys 20	Trp	Ala	Pro	Trp	Pro 25	Ser	Ala	Pro	Val	Pro 30	Ala	Thr
Arg	Asp	Arg 35	Ala	Pro	Arg	Pro	Ala 40	Arg	Gly	Arg	Arg	Pro 45	Asp	Pro	Thr

Ser Gln Gln Ala Lys Ala Trp Arg Pro Ser Pro Pro Ala Ala Arg Ser

Trp Pro Pro Thr Thr Thr Gly Ala Ala Trp Val Pro Leu Pro Ala

Thr Ala Pro Ala Ala Val Pro Ser Ala Pro Gly Lys Pro Phe Pro Thr

75

90

55

70

85

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Pro Gln Val Ser Pro Arg Leu Thr Arg Val Ile Gly Gly Pro Ala Ser
            100
                                105
Phe Ser Gly Ser Pro Pro Ser Arg Ser Trp Pro Arg Cys Trp Ser Pro
        115
                           120
Gln Ser Thr Arg Asn Leu Pro Arg Pro Pro Ala Ala
    130
                        135
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Pro Trp Thr Leu Gly Gly Pro Glu Leu Asp Ala Met Gly Gly Cys Ala
                  5
                                    10
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Gly Ser Arg Arg Arg Phe Ser Asp Ser Glu Gly Glu Glu Thr Val Pro
            20
Glu Pro Arg Leu Pro Leu Leu Asp His Gln Gly Ala His Trp Lys Asn
Ala Val Gly Phe Trp Leu Leu Gly Leu Cys Asn Asn Phe Ser Tyr Val
Val Met Leu Ser Ala Ala His Asp Ile Leu Ser His Lys Arg Thr Ser
65
                    70
                                         75
Gly Asn Gln Ser His Val Asp Pro Gly Pro Thr Pro Ile Pro His Asn
Ser Ser Ser Arg Phe Asp Cys Asn Ser Val Ser Thr Ala Ala Val Leu
Leu Ala Asp Ile Leu Pro Thr Leu Val Ile Lys Leu Leu Xaa Xaa Xaa
                           120
Gly Leu His Leu Leu Pro Xaa Thr Val Glu Asp Ala Val Xaa Leu Cys
                      135
Ala Leu Xaa Gly Thr Ala
145
                  150
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Arg Ala Phe Ala Xaa Leu Gly Trp Ser Ser Gly Arg Val Ser Arg Pro
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Glu His Val Asp Ala His Pro Pro Leu Ser Leu Met Glu Val Val Thr 35 40 45

Phe Gly Asp Val Ala Val His Phe Ser Arg Glu Glu Trp Gln Cys Leu 50 60

Asp Pro Gly Gln Arg Ala Leu Tyr Arg Glu Val Met Leu Glu Asn His 65 70 75 80

Ser Ser Val Ala Gly Leu Ala Gly Phe Leu Val Phe Lys Pro Glu Leu 85 90 95

Ile Ser Arg Leu Glu Gln Gly Glu Glu Pro Trp Val Leu Asp Leu Gln 100 105 110

Gly Ala Glu Gly Thr Glu Ala Pro Xaa Thr Ser Lys Thr Gly Glu Ala 115 120 125

<210> 1374

<211> 398

<212> PRT

<213> Homo sapiens

<400> 1374

Ser Ser Trp Leu Arg Ser Arg Ser Gly Met Gln Thr Asp Leu Gln Asn 1 5 10 15

Leu Gly Asn Asp Ser Gly Asp His Ser Asp His Met His Tyr Tyr Gln 20 25 30

Gly Lys Lys Tyr Phe Arg Asp Arg Arg Gly Gly Arg Asn Ser Asp 35 40 45

Trp Ser Ser Asp Thr Asn Arg Gln Gly Gln Gln Ser Ser Ser Asp Cys
50 55 60

Tyr Ile Tyr Asp Ser Ala Thr Gly Tyr Tyr Tyr Asp Pro Leu Ala Gly 65 70 75 80

Thr Tyr Tyr Asp Pro Asn Thr Gln Gln Glu Val Tyr Val Pro Gln Asp 85 90 95

Pro Gly Leu Pro Glu Glu Glu Glu Ile Lys Glu Lys Lys Pro Thr Ser 100 105 110

Gln Gly Lys Ser Ser Ser Lys Lys Glu Met Ser Lys Arg Asp Gly Lys

		115	•				120	)				12	5		
Glu	Lys 130	Lys	Asp	Arç	Gly	Val		Arg	Ph€	e Glr	140		n Ala	Ser	Glu
Gly 145	Lys	Ala	Pro	Ala	Glu 150		Val	Phe	. Lys	Lys 155		Leu	Pro	Pro	Thr 160
Val	Lys	Lys	Glu	Glu 165		Pro	Pro	Pro	Pro 170		Val	. Val	. Asn	Pro 175	
Ile	Gly	Leu	Leu 180		Glu	Туг	Gly	Gly 185		Ser	Asp	Туг	Glu 190		Glu
Glu	Glu	Glu 195	Glu	Gln	Thr	Pro	Pro 200		Gln	Pro	Arg	Thr 205	Ala	Gln	Pro
Gln	Lys 210	Arg	Glu	Glu	Gln	Thr 215		Lys	Glu	Asn	Glu 220		Asp	Lys	Leu
Thr 225	Asp	Trp	Asn	Lys	Leu 230	Ala	Cys	Leu	Leu	Cys 235		Arg	Gln	Phe	Pro 240
Asn	Lys	Glu	Val	Leu 245	Ile	Lys	His	Gln	Gln 250	Leu	Ser	Asp	Leu	His 255	Lys
Gln	Asn	Leu	Glu 260	Ile	His	Arg	Lys	11e 265	Lys	Gln	Ser	Glu	Gln 270	Glu	Leu
Ala	Tyr	Leu 275	Glu	Arg	Arg	Glu	Arg 280	Glu	Gly	Lys	Phe	Lys 285	Gly	Arg	Gly
Asn	Asp 290	Arg	Arg	Glu	Lys	Leu 295	Gln	Ser	Phe	Asp	Ser 300	Pro •	Glu	Arg	Lys
Arg 305	Ile	Lys	Tyr	Ser	Arg 310	Glu	Thr	Asp	Ser	Asp 315	Arg	Lys	Leu	Val	Asp 320
Lys	Glu	Asp	Ile	Asp 325	Thr	Ser	Ser	Lys	Gly 330	Gly	Cys	Val	Gln	Gln 335	Ala
Thr	Gly	Trp	Arg 340	Lys	Gly	Thr	Gly	Leu 345	Gly	Tyr	Gly	His	Pro 350	Gly	Leu
Ala	Sep	Ser 355	Glu	Glu	Ala	Glu	Gly 360	Arg	Met	Arg		Pro 365	Ser	Val	Gly
Ala	Ser 370	Gly	Arg	Thr	Ser	Lys 375	Arg	Gln	Ser	Asn	Glu 380	Thr	Tyr	Arg	Asp
Ala	Val	Arg	Arg	Val	Met	Phe	Ala	Arg	Tyr	Lys	Glu	Leu	Asp		

385 390 395 <210> 1375 <211> 167 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (157) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (161) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (163) <223> Xaa equals any of the naturally occurring L-amino acids <400> 1375 His Arg Gly Lys Arg Tyr Thr Asp Ser Thr Val Arg Asn Ser Arg Val Asp Pro Arg Val Arg Ser Ala Lys Pro Glu Ser Cys Pro Phe Ser Leu Pro Gly Gln His Glu Leu His His Ser Leu His Leu Leu His Gln Leu Pro Val Pro Gly Leu Cys Pro Gly Ala Gln Leu Arg Arg Pro Ala Gly 55 Gln Gln Arg Gly Gln Arg Leu Cys Arg Arg Trp Gly Leu Trp Phe Pro Asp Leu Arg Val Pro Leu His Gln Leu Gln Gly Arg His Gly Val Arg 85 Gly Pro Gly His Arg Asp Ser Arg Gly Ser Gly Arg Asn Gly Ser Ile 100 Gln Asn Glu Lys Glu Thr Met Gln Lys Leu Asn Asp Arg Leu Ala Ser 120 Tyr Leu Asp Lys Met Lys Glu Pro Gly Asp Arg Glu Thr Gly Gly Trp 130 135

Lys Ala Lys Thr Arg Glu His Phe Gly Glu Glu Gly Xaa Gln Val Arg 145 150 155 160

Xaa Trp Xaa Pro Leu Ile Gln 165

<210> 1376

<211> 448

<212> PRT

<213> Homo sapiens

<400> 1376

Leu Pro Asp Val Glu Lys Leu Gly Arg Arg Arg Gly Arg Lys Met Asp
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Ser Val Glu Lys Gly Ala Ala Thr Ser Val Ser Asn Pro Arg Gly Arg 20 25 30

Pro Ser Arg Gly Arg Pro Pro Lys Leu Gln Arg Asn Ser Arg Gly Gly 35 40 45

Gln Gly Arg Gly Val Glu Lys Pro Pro His Leu Ala Ala Leu Ile Leu
50 55 60

Ala Arg Gly Gly Ser Lys Gly Ile Pro Leu Lys Asn Ile Lys His Leu 65 70 75 80

Ala Gly Val Pro Leu Ile Gly Trp Val Leu Arg Ala Ala Leu Asp Ser 85 90 95

Gly Ala Phe Gln Ser Val Trp Val Ser Thr Asp His Asp Glu Ile Glu 100 105 110

Asn Val Ala Lys Gln Phe Gly Ala Gln Val His Arg Arg Ser Ser Glu 115 120 125

Val Ser Lys Asp Ser Ser Thr Ser Leu Asp Ala Ile Ile Glu Phe Leu 130 135 140

Asn Tyr His Asn Glu Val Asp Ile Val Gly Asn Ile Gln Ala Thr Ser 145 150 155 160

Pro Cys Leu His Pro Thr Asp Leu Gln Lys Val Ala Glu Met Ile Arg 165 170 175

Glu Glu Gly Tyr Asp Ser Val Phe Ser Val Val Arg Arg His Gln Phe 180 185 190

Arg	Trp	Ser 195		Ile	: Gln	Lys	Gly 200		. Arg	Glu	Val	. Thr 205		Pro	Le
Asn	Leu 210	Asn	Pro	Ala	Lys	Arg 215		Arg	Arg	, Glm	Asp 220		Asp	Gly	Glı
Leu 225	Tyr	Glu	Asn	Gly	Ser 230		Туг	Phe	Ala	Lys 235		His	Leu	Ile	Glu 240
Met	Gly	Туг	Leu	Gln 245	Gly	Gly	Lys	Met	Ala 250		Tyr	Glu	Met	Arg 255	
Glu	His	Ser	Val 260	Asp	Ile	Asp	Val	Asp 265		Asp	Trp	Pro	11e 270		Glu
Gln	Arg	Val 275	Leu	Arg	Tyr	Gly	Tyr 280	Phe	Gly	Lys	Glu	Lys 285	Leu	Lys	Glu
Ile	Lys 290	Leu	Leu	Val	Суѕ	Asn 295	Ile	Asp	Gly	Cys	Leu 300	Thr	Asn	Gly	His
11e 305	туг	Val	Ser	Gly	Asp 310	Gln	Lys	Glu	Ile	Ile 315	Ser	туг	Asp	Val	Lys 320
Asp	Ala	Ile	Gly	11e 325	Ser	Leu	Leu	Lys	Lys 330	Ser	Gly	Ile	Glu	Val 335	Arg
Leu	Ile	Ser	Glu 340	Arg	Ala	Суз	Ser	Lys 345	Gln	Thr	Leu	Ser	Ser 350	Leu	Lys
Leu	Asp	Cys 355	Lys	Met	Glu	Val	Ser 360	Val	Ser	Asp	Lys	Leu 365	Ala	Val	Val
Asp	Glu 370	Trp	Arg	Lys	Glu	Met 375	Gly	Leu	Суѕ	Trp	Lys 380	Glu	Val	Ala	туr
Leu 385	Gly	Asn	Glu	Val	Ser 390	Asp	Glu	Glu	Cys	Leu 395	Lys	Arg	Val	Gly	Leu 400
Ser	Gly	Ala	Pro	Ala 405	Asp	Ala	Cys	Ser	Thr 410	Ala	Gln	Lys	Ala	Val 415	Gly
Tyr	Ile	Cys	Lys 420	Cys	Asn	Gly	Gly	Arg 425	Gly	Ala	Ile	Arg	Glu 430	Phe	Ala
Glu	His	11e 435	Суѕ	Leu	Leu	Met	Glu 440	Lys	Val	Asn	Asn	Ser 445	Cys	Gln	Lys

<210> 1377 <211> 469 <212> PRT <213> Homo sapiens <400> 1377 Gly Pro Ala Lys Met Ala Ala Ser Cys Leu Val Leu Leu Ala Leu Cys Leu Leu Pro Leu Leu Leu Gly Gly Trp Lys Arg Trp Arg Arg Gly Arg Ala Ala Arg His Val Val Ala Val Leu Gly Asp Val Gly Arg Ser Pro Arg Met Gln Tyr His Ala Leu Ser Leu Ala Met His 50 55 60 Gly Phe Ser Val Thr Leu Leu Gly Phe Cys Asn Ser Lys Pro His Asp Glu Leu Leu Gln Asn Asn Arg Ile Gln Ile Val Gly Leu Thr Glu Leu Gln Ser Leu Ala Val Gly Pro Arg Val Phe Gln Tyr Gly Val Lys Val Val Leu Gln Ala Met Tyr Leu Leu Trp Lys Leu Met Trp Arg Glu Pro Gly Ala Tyr Ile Phe Leu Gln Asn Pro Pro Gly Leu Pro Ser Ile Ala 130 135 Val Cys Trp Phe Val Gly Cys Leu Cys Gly Ser Lys Leu Val Ile Asp Trp His Asn Tyr Gly Tyr Ser Ile Met Gly Leu Val His Gly Pro Asn 165 His Pro Leu Val Leu Leu Ala Lys Trp Tyr Glu Lys Phe Phe Gly Arg Leu Ser His Leu Asn Leu Cys Val Thr Asn Ala Met Arg Glu Asp Leu 205 200

Ala Asp Asn Trp His Ile Arg Ala Val Thr Val Tyr Asp Lys Pro Ala

Ser Phe Phe Lys Glu Thr Pro Leu Asp Leu Gln His Arg Leu Phe Met

225					230					235					240
Lys	Leu	Gly	Ser	Met 245	His	Ser	Pro	Phe	Arg 250	Ala	Arg	Ser	Glu	Pro 255	Glu
Asp	Pro	Val	Thr 260	Glu	Arg	Ser	Ala	Phe 265	Thr	Glu	Arg	Asp	Ala 270	Gly	Ser
Gly	Leu	Val 275	Thr	Arg	Leu	Arg	Glu 280	Arg	Pro	Ala	Leu	Leu 285	Val	Ser	Ser
Thr	Ser 290	Trp	Thr	Glu	Asp	Glu 295	Asp	Phe	Ser	Ile	Leu 300	Leu	Ala	Ala	Leu
Glu 305	Lys	Phe	Glu	Gln	Leu 310	Thr	Leu	Asp	Gly	His 315	Asn	Leu	Pro	Ser	Leu 320
Val	Cys	Val	Ile	Thr 325	Gly	Lys	Gly	Pro	Leu 330	Arg	Glu	туr	Tyr	Ser 335	Arg
Leu	Ile	His	Gln 340	Lys	His	Phe	Gln	His 345	Ile	Gln	Val	Суѕ	Thr 350	Pro	Trp
Leu	Glu	Ala 355	Glu	Asp	Tyr	Pro	Leu 360	Leu	Leu	Gly	Ser	Ala 365	Asp	Leu	Gly
Val	Cys 370	Leu	His	Thr	Ser	Ser 375	Ser	Gly	Leu	Asp	Leu 380	Pro	Met	Lys	Val
Val 385	Asp	Met	Phe	Gly	Cys 390	Cys	Leu	Pro	Val	Cys 395	Ala	Val	Asn	Phe	Lys 400
				405	Val				410		-			415	
			420		Ala			425					430		
		435			Lys		440					445			
	450				Trp	Asp 455	Glu	Ser	Trp	Val	Gln 460	Thr	Val	Leu	Pro
Leu 465	Val	Met	Asp	Thr											

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1437

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Phe Gly Ser Ser Val Leu Gly Gln Tyr Ile Ser Asp Phe Ser Val Arg 225 230 235 240

Ala Leu Val Asp Leu Gln Tyr Ile Lys Ile Thr Arg Gln Gln Tyr Gln 245 250 255

Asn Gly Leu Leu Ala Ser Arg Met Glu Asn Ser Pro Gln Phe Pro Ile 260 265 270

Asp Gly Cys Thr Thr His Met Glu Asn Leu Ala Glu Lys Ser Glu Leu 275 280 285

Pro Val Val Asp Glu Thr Thr Thr Leu Leu Asn Glu Arg Asn Ser Leu 290 295 300

Leu His Lys Ala Ser His Glu Asn Ala Ile 305 310

<210> 1379

<211> 131

<212> PRT

<213> Homo sapiens

<400> 1379

Ser Cys Pro Val Leu Lys Met Phe Pro Glu Gln Gln Lys Glu Glu Phe
1 5 10 15

Val Ser Val Trp Val Arg Asp Pro Arg Ile Gln Lys Glu Asp Phe Trp 20 25 30

His Ser Tyr Ile Asp Tyr Glu Ile Cys Ile His Thr Asn Ser Met Cys
35 40 45

Phe Thr Met Lys Thr Ser Cys Val Arg Arg Arg Tyr Arg Glu Phe Val 50 55 60

Trp Leu Arg Gln Arg Leu Gln Ser Asn Ala Leu Leu Val Gln Leu Pro 65 70 75 80

Glu Leu Pro Ser Lys Asn Leu Phe Phe Asn Met Asn Asn Arg Gln His
85 90 95

Val Asp Gln Arg Arg Gln Gly Leu Gly Asn Phe Leu Arg Lys Val Leu 100 105 110

Gln Met His Phe Cys Phe Gln Ile Ala Ala Phe Thr Ser Ser Leu Gln 115 120 125

Ser His Leu

WO 00/55350 PCT/US00/05882

1439

130

<210> 1380 <211> 219 <212> PRT <213> Homo sapiens <400> 1380 Pro Gly Ala Ala Trp Ser Arg Pro Asp Leu Arg Gly Cys Cys Thr Gly Pro Gln Pro Ala Leu Arg Met Leu Val Leu Pro Ser Pro Cys Pro Gln Pro Leu Ala Phe Ser Ser Val Glu Thr Met Glu Gly Pro Pro Arg Arg Thr Cys Arg Ser Pro Glu Pro Gly Pro Ser Ser Ser Ile Gly Ser Pro 55 Gln Ala Ser Ser Pro Pro Arg Pro Asn His Tyr Leu Leu Ile Asp Thr Gln Gly Val Pro Tyr Thr Val Leu Val Asp Glu Glu Ser Gln Arg Glu Pro Gly Ala Ser Gly Ala Pro Gly Gln Lys Lys Cys Tyr Ser Cys Pro Val Cys Ser Arg Val Phe Glu Tyr Met Ser Tyr Leu Gln Arg His Ser 120 Ile Thr His Ser Glu Val Lys Pro Phe Glu Cys Asp Ile Cys Gly Lys 135 Ala Phe Lys Arg Ala Ser His Leu Ala Arg His His Ser Ile His Leu 150 Ala Gly Gly Gly Arg Pro His Gly Cys Pro Leu Cys Pro Arg Arg Phe Arg Asp Ala Gly Glu Leu Ala Gln His Ser Arg Val His Ser Gly Glu Arg Pro Phe Gln Cys Pro His Cys Pro Arg Arg Phe Met Glu Gln Asn 200

Thr Leu Gln Lys His Thr Arg Trp Lys His Pro

215

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Val Lys Ser Cys Pro Asp Ala Ile Lys Glu Val Phe Asp Asn Lys Phe
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His Ile Ile Gly Ala Val Gly Ile Gly Ile Ala Val Val Met Ile Phe
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Ala Leu Lys Asp Tyr Ala Leu Glu Lys Glu Lys Val Lys Lys Phe Leu
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Gln Glu Phe Tyr Gln Asp Asp Glu Leu Gly Lys Lys Gln Phe Lys Tyr
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Gly Asn Gln Leu Val Arg Leu Ala His Arg Glu Gln Val Ala Leu Tyr
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Ile	Cys	Glu 115	Asn	Ala	Arg	Arg	Tyr 120		Lys	Xaa	Phe	125		Ala	Va.
Gln	Glu 130	Leu	Leu	Pro		Туг 135		Glu	Arg	Glu	Val 140		Asn	Lys	Ası
Val 145	Leu	Asp	Val	Tyr	Ile 150	Glu	His	Arg	Leu	Met 155		Glu	Gln	Arg	Se:
Arg	Asp	Pro	Gly	Met 165	Val	Arg	Ser	Pro	Gln 170	Asn	Gln	Tyr	Pro	Ala 175	Glu
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Thr	Val 210	Arg	Gly	Ile	Val	Thr 215	Arg	Val	Ser	Glu	Val 220	Lys	Pro	Lys	Met
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Gly	Ser	Arg 275	Phe	Ile	Lys	Phe	Gln 280	Glu	Met	Lys	Met	Gln 285	Glu	His	Ser
Asp	Gln 290	Val	Pro	Val	Gly	Asn 295	Ile	Pro	Arg	Ser	Ile 300	Thr	Val	Leu	Val
G1u 305	Gly	Glu	Asn	Thr	Arg 310	Ile	Ala	Gln	Pro	Gly 315	Asp	His	Val	Ser	Val 320
Thr	Gly	Ile	Phe	Leu 325	Pro	Ile	Leu	Arg	Thr 330	Gly	Phe	Arg	Gln	Val 335	Val
Gln	Gly	Leu	Leu 340	Ser	Glu	Thr	Tyr	Leu 345	Glu	Ala	His	Arg	11e 350	Val	Lys
Met.	Asn	T.ve	Sar	Glu	Aen	Acn	Glu	Sar	Glv	λla	Glu	Glu.	T 011	Th-	A

		355					360					365	,		
Glu	Glu 370		Arg	Gln	Ile	Ala 375		Glu	Asp	Phe	Tyr 380		Lys	Leu	Ala
Ala 385		Ile	Ala	Pro	Glu 390		Tyr	Gly	His	Glu 395		Val	Lys	Lys	Ala 400
Leu	Leu	Leu	Leu	Leu 405	Val	Gly	Gly	Val	Asp 410		Ser	Pro	Arg	Gly 415	
Lys	Ile	Arg	Gly 420		Ile	Asn	Ile	Cys 425		Met	Gly	Asp	Pro 430	-	Val
Ala	Lys	Ser 435	Gln	Leu	Leu	Ser	Туг 440		Asp	Arg	Leu	Ala 445		Arg	Ser
Gln	Туг 450	Thr	Thr	Gly	Arg	Gly 455	Ser	Ser	Gly	Val	Gly 460		Thr	Ala	Ala
Val 465	Leu	Arg	Asp	Ser	Val 470	Ser	Gly	Glu	Leu	Thr 475	Leu	Glu	Gly	Gly	Ala 480
Leu	Val	Leu	Ala	Asp 485	Gln	Gly	Val	Cys	Cys 490	Ile	Asp	Glu	Phe	Asp 495	
Met	Ala	Glu	Ala 500	Asp	Arg	Thr	Ala	Ile 505	His	Glu	Val	Met	Glu 510	Gln	Gln
Thr	Ile	Ser 515	Ile	Ala	Lys	Ala	Gly 520	Ile	Leu	Thr	Thr	Leu 525	Asn	Ala	Arg
Cys	Ser 530	Ile	Leu	Ala	Ala	Ala 535	Asn	Pro	Ala	Tyr	Gly 540	Arg	Tyr	Asn	Pro
Arg 545	Arg	Ser	Leu	Glu	Gln 550	Asn	Ile	Gln	Leu	Pro 555	Ala	Ala	Leu	Leu	Ser 560
Arg	Phe	Asp	Leu	Leu 565	Trp	Leu	Ile	Gln	<b>Asp</b> 570	Arg	Pro	Asp	Arg	Asp 575	Asn
Asp	Leu	Arg	Leu 580	Ala	Gln	His	Ile	Thr 585	Tyr	Val	His	Gln	His 590	Ser	Arg
Gln	Pro	Pro 595	Ser	Gln	Phe	Glu	Pro 600	Leu	Asp	Met	Lys	Leu 605	Met	Arg	Arg
Tyr	Ile 610	Ala	Met	Cys	Arg	Glu 615	Lys	Gln	Pro	Met	Val 620	Pro	Glu	Ser	Leu
Ala	Asp	Tvr	Ile	Thr	Ala	Ala	Tvr	Val	Glu	Met	Ara	Ara	Glu	Δla	Trn

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Glu	Lys	Glu 675	Asp	Val	Asn	Glu	Ala 680		Arg	Leu	Met	Glu 685	Met	Ser	Lys
Asp	Ser 690		Leu	Gly	Asp	Lys 695		Gln	Thr	Ala	Arg 700		Gln	Arg	Pro
Ala 705		Val	Ile	Phe	Ala 710	Thr	Val	Arg	Glu	Leu 715		Ser	Gly	Gly	Arg 720
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Thr	Pro	Ala	G1n 740	Phe	Gln	Ala	Ala	Leu 745	Asp	Glu	Tyr	Glu	Glu 750	Leu	Asn
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Ala	His	Ser 35	Glu	Arg	Thr	Ser	Phe 40	Asn	Tyr	Ala	Met	Lys 45	Glu	Ala	Ala
Ala	Ala 50	Ala	Leu	Lys	Lys	Lys 55	Gly	Trp	Glu	Val	Val 60	Glu	Ser	Asp	Leu
Tyr 65	Ala	Met	Asn	Phe	Asn 70	Pro	Ile	Ile	Ser	Arg 75	Lys	Asp	Ile	Thr	Gly 80
Lys	Leu	Lys	Asp	Pro 85	Ala	Asn	Phe	Gln	Tyr 90	Pro	Ala	Glu	Ser	Val 95	Leu

Ala	Tyr	Lys	Glu 100		His	Leu	Ser	Pro 105		Ile	Val	Ala	Glu 110		Lys
Lys	Leu	Glu 115	Ala	Ala	Asp	Leu	Val 120	Ile	Phe	Gln	Phe	Pro 125	Leu	Gln	Trp
Phe	Gly 130	Val	Pro	Ala	Ile	Leu 135	Lys	Gly	Trp	Phe	Glu 140		Val	Phe	Ile
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Arg	Ser	Lys	Lys	Ala 165	Val	Leu	Ser	Ile	Thr 170	Thr	Gly.	Gly	Ser	Gly 175	Ser
Met	Tyr	Ser	Leu 180	Gln	Gly	Ile	His	Gly 185	Asp	Met	Asn	Val	Ile 190.		Trp
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Pro	Gln 210	Leu	Thr	Tyr	Ser	Ile 215	Gly	His	Thr	Pro	Ala 220	Asp	Ala	Arg	Ile
Gln 225	Ile	Leu	Glu	Gly	Trp 230	Lys	Lys	Arg	Leu	Glu 235	Asn	Ile	Trp	-	Glu 240
Thr	Pro	Leu	Tyr	Phe 245	Ala	Pro	Ser	Ser	Leu 250	Phe	Asp	Leu	Asn	Phe 255	Gln
Ala	Gly	Phe	Leu 260	Met	Lys	Lys	Glu	Val 265	Gln	Asp	Glu	Glu	Lys 270	Asn	Lys
Lys	Phe	Gly 275	Leu	Ser	Val	Gly	His 280	His	Leu	Gly	Lys	Ser 285	Ile	Pro	Thr
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Leu Val Asp Gln Ser Leu Arg Leu Asp Cys Arg His Glu Asn Thr Ser 35 40 45

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His Val Leu Phe Gly Thr Val Gly Val Pro Glu His Thr Tyr Arg Ser 65 70 75 80

Arg Thr Asn Phe Thr Ser Lys Tyr Asn Met Lys Val Leu Tyr Leu Ser 85 90 95

Ala Phe Thr Ser Lys Asp Glu Gly Thr Tyr Thr Cys Ala Leu His His 100 105 110

Ser Gly His Ser Pro Pro Ile Ser Ser Gln Asn Val Thr Val Leu Arg 115 120 125

Asp Lys Leu Val Lys Cys Glu Gly Ile Ser Leu Leu Ala Gln Asn Thr 130 135 140

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Asp Phe Met Ser Leu 165

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Pro Val Ser Arg Gly Cys Ser Pro Arg His Gly Thr Gly Pro Arg Leu 20 25 30

Thr Met Ala Ala Arg His Ser Thr Leu Asp Phe Met Leu Gly Ala 35 40 45

Lys Ala Asp Gly Glu Thr Ile Leu Lys Gly Leu Gln Ser Ile Phe Gln 50 60

Glu Gln Gly Met Ala Glu Ser Val His Thr Trp Gln Asp His Gly Tyr

WO 00/55350 PCT/US00/05882

1447

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Tyr	Pro	His	Gly 100	Leu	Val	Leu	Leu	Asp 105		Gln	Ser	Tyr	Asp		Asp
Ala	Gln	Gly 115	Lys	Glu	Glu	Ile	120		Ile	Leu	Asn	Lys 125		Glu	Glu
Arg	Met 130	Lys	Glu	Leu	Ser	Gln 135		Ser	Thr	Gly	Arg 140		Lys	Arg	Leu
Pro 145	Pro	Ile	Val	Arg	Gly 150	Gly	Ala	Ile	Asp	Arg 155		Trp	Pro	Thr	Ala 160
Asp	Gly	Arg	Leu	Val 165	Glu	туг	Asp	Ile	Asp 170		Val	Val	Tyr	Asp 175	Glu
Asp	Ser	Pro	Туг 180	Gln	Asn	Ile	Lys	11e 185	Leu	His	Ser	Lys	Gln 190	Phe	Gly
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Ala	Tyr 210	Thr	Arg	Ala	Ile	Met 215	Gly	Ser	Gly	Lys	Glu 220	Asp	туг	Thr	Gly
225					230		Gly			235					240
Ile	Val	Lys	Leu	Lys 245	Pro	Lys	Met	Val	Thr 250	Met	Val	Glu	Ile	Asp 255	Gln
Met	Val	Ile	Asp 260	Gly	Cys	Lys	Lys	Туг 265	Met	Arg	Lys	Thr	Cys 270	Gly	Asp
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Cys	11e 290	Pro	Val	Leu	Lys	Arg 295	Tyr	Ala	Lys	Glu	Gly 300	Arg	Glu	Phe	Asp
305					310		Ala			315					320
				325			Leu		330					335	
Lys	Val	Leu	Lys	Gln	Asp	Gly	Lys	Tyr	Phe	Thr	Gln	Gly	Asn	Cys	Val

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	G <b>l</b> u	Gln	Cys 35	Ile	Leu	Tyr	Leu	Gly 40	Pro	Arg	Tyr	Gly	Phe 45	Gly	Glu	Ala
	Gly	Lys 50	Pro	Lys	Phe	Gly	Ile 55	Glu	Pro	Asn	Ala	Glu 60	Leu	Ile	Tyr	Glu
	Val 65	Thr	Leu	Lys	Ser	Phe 70	Glu	Lys	Ala	Lys	Glu 75	Ser	Trp	Glu	Met	Asp 80
	Thr	Lys	Glu	Lys	Leu 85	Glu	Gln	Ala	Ala	Ile 90	Val	Lys	Glu	Lys	Gly 95	Thr
	Val	Tyr	Phe	Lys 100	Gly	Gly	Lys	Tyr	Met 105	Gln	Ala	Val	Ile	Gln 110	Tyr	Gly
:	Lys	Ile	Val 115	Ser	Trp	Leu	Glu	Met 120	Glu	Tyr	Gly	Leu	Ser 125	Glu	Lys	Glu
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	Met 145	Cys	Tyr	Leu	Lys	Leu 150	Arg	Glu	Tyr	Thr	Lys 155	Ala	Val	Glu	Cys	Cys 160
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Arg	Gly	Glu	Ala 180	Gln	Leu	Leu	Met	Asn 185	Glu	Phe	Glu	Ser	Ala 190	Lys	Gly
Asp	Phe	Glu 195	Lys	Val	Leu	Glu	Val 200	Asn	Pro	Gln	Asn	Lys 205	Ala	Ala	Arg
Leu	Gln 210	Ile	Ser	Met	Cys	Gln 215	Lys	Lys	Ala	Lys	Glu 220	His	Asn	Glu	Arg
Asp 225	Arg	Arg	Tyr	Thr	Pro 230	Thr	Сув	Ser	Arg	Ser 235	Leu	Gln	Ser	Arg	Met 240
Pro	Arg	Lys	Arg	Pro 245	Ile	Lys	Gln	тгр	Ala 250	Arg	Arg	Leu	Gln	Lys 255	Gly
Ser	Leu	Met	Lys 260	Lys	Glu	Gln	Thr	Val 265	Lys	Gln	Trp	Lys	Lys 270	Arg	Asn
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Leu	Gly	Ser	Asn 20	Thr	Ala	Pro	Ala	Leu 25	Arg	Val	Met	Val	Gln 30	Ala	Trp
Туr	Met	Asp 35	Asp	Ala	Pro	Gly	Asp 40	Pro	Arg	Gln	Pro	His 45	Arg	Pro	Asp
Pro	Gly	Arg	Pro	Val	Gly	Leu	Glu	Gln	Leu	Arg	Arg	Leu	Gly	Val	Leu

Tyr Trp Lys Leu Asp Ala Asp Lys Tyr Glu Asn Asp Pro Glu Leu Glu

Lys Ile Arg Arg Glu Arg Asn Tyr Ser Trp Met Asp Ile Ile Thr Ile

Cys Lys Asp Lys Leu Pro Asn Tyr Glu Glu Lys Ile Lys Met Phe Tyr

70 75

105

65

Glu Glu His Leu His Leu Asp Asp Glu Ile Arg Tyr Ile Leu Asp Gly
115 120 125

Ser Gly Tyr Phe Asp Val Arg Asp Lys Glu Asp Gln Trp Ile Arg Ile 130 135 140

Phe Met Glu Lys Gly Asp Met Val Thr Leu Pro Ala Gly Ile Tyr His 145 150 155 160

Arg Phe Thr Val Asp Glu Lys Asn Tyr Thr Lys Ala Met Arg Leu Phe 165 170 175

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<400> 1388

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Leu Asp Ser Pro Thr Phe His Leu Thr Leu His Tyr Pro Thr Glu His  $20 \hspace{1.5cm} 25 \hspace{1.5cm} 30$ 

Val Gln Phe Trp Val Gly Ser Pro Ser Thr Pro Ala Gly Trp Val Arg 35 40 45

Glu Gly Asp Thr Val Gln Leu Leu Cys Arg Gly Asp Gly Ser Pro Ser 50 55 60

Pro Glu Tyr Thr Leu Phe Arg Leu Gln Asp Glu Gln Glu Glu Val Leu 65 70 75 80

Asn Val Asn Leu Glu Gly Asn Leu Thr Leu Glu Gly Val Thr Arg Gly 85 90 95

Gln Ser Gly Thr Tyr Gly Cys Arg Val Glu Asp Tyr Asp Ala Ala Asp 100 105 110

Asp	Val	Gln 115	Leu	Ser	Lys	Thr	Leu 120		Leu	Arg	Val	Ala 125		Leu	Asp
Pro	Leu 130		Leu	Ser	Glu	Gly 135		Val	Leu	Ser	Leu 140		Leu	. Asn	Ser
Ser 145		Val	Val	Asn	Cys 150		Val	His	Gly	Leu 155		Thr	Pro	Ala	Leu 160
Arg	Trp	Thr	Lys	Asp 165	Ser	Thr	Pro	Leu	Gly 170	Asp	Gly	Pro	Met	Leu 175	
Leu	Ser	Ser	Ile 180	Thr	Phe	Asp	Ser	Asn 185	Gly	Thr	Tyr	Val	Cys 190		Ala
Ser	Leu	Pro 195	Thr	Val	Pro	Val	Leu 200	Ser	Arg	Thr	Gln	Asn 205	Phe	Thr	Leu
Leu	Val 210	Gln	Gly	Ser	Pro	Glu 215		Lys	Thr	Ala	Glu 220	Ile	Glu	Pro	Lys
Ala 225	Asp	Gly	Ser	Trp	Arg 230	Glu	Gly	Asp	Glu	Val 235	Thr	Leu	Ile	Cys	Ser 240
Ala	Arg	Gly	His	Pro 245	Asp	Pro	Lys	Leu	Ser 250	Trp	ser	Gln	Leu	Gly 255	Gly
Ser	Pro	Ala	Glu 260	Pro	Ile	Pro	Gly	Arg 265	Gln	Gly	Trp	Val	Ser 270	Ser	ser
		275					280			Arg		285			
	290					295				His	300				
305					310					Val 315					320
				325					330	Val				335	
			340					345		Gln			350		
		355					360			His		365			
Pro	Glu 37 <b>0</b>	Gln	Thr	Gly	Leu	Leu 375	Met	Gly	Gly	Ala	Ser 380	Gly	Gly	Ala	Arg

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  Tyr Ala Ile Glu Ala Ile Lys Leu Gly Ser Thr Ala Ile Gly Ile Gln
  Thr Ser Glu Gly Val Cys Leu Ala Val Glu Lys Arg Ile Thr Ser Pro
  Leu Met Glu Pro Ser Ser Ile Glu Lys Ile Val Glu Ile Asp Ala His
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  Ile Gly Cys Ala Met Ser Gly Leu Ile Ala Asp Ala Lys Thr Leu Ile
                                 105
  Asp Lys Ala Arg Val Glu Thr Gln Asn His Trp Phe Thr Tyr Asn Glu
                         120
  Thr Met Thr Val Glu Ser Val Thr Gln Ala Val Ser Asn Leu Ala Leu
     130
                         135
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Gln Phe Gly Glu Glu Asp Ala Asp Pro Gly Ala Met Ser Arg Pro Phe

Gly Val Ala Leu Leu Phe Gly Gly Val Asp Glu Lys Gly Pro Gln Leu

Phe His Met Asp Pro Ser Gly Thr Phe Val Gln Cys Asp Ala Arg Ala

155

175

Ile Gly Ser Ala Ser Glu Gly Ala Gln Ser Ser Leu Gln Glu Val Tyr

His	Lys 210	Ser	Met	Thr	Leu	Lys 215	Glu	Ala	Ile	Lys	Ser 220	Ser	Leu	Ile	Ile
Leu 225	Lys	Gln	Val	Met	Glu 230	Glu	Lys	Leu	Asn	Ala 235	Thr	Asn	Ile	Glu	Leu 240
Ala	Thr	Val	Gln	Pro 245	Gly	Gln	Asn	Phe	His 250	Met	Phe	Thr	Lys	Glu 255	Glu
Leu	Glu	Glu	Val 260	Ile	Lys	Asp	Ile								
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Ala	Thr	Arg 35	Gly	Leu	Pro	Ala	Ala 40	Arg	Val	Arg	Trp	Glu 45	Ser	Ser	Phe
Ser	Arg 50	Thr	Val	Val	Ala	Pro 55	Ser	Ala	Val	Ala	Gly 60	Lys	Arg	Pro	Pro
Glu 65	Pro	Thr	Thr	Pro	Trp 70	Gln	Glu	Asp	Pro	Glu 75	Pro	Glu	Asp	Glu	Asn 80
Leu	Tyr	Glu	Lys	Asn 85	Pro	Asp	Ser	His	Gly 90	Tyr	Asp	Lys	Asp	Pro 95	Val
Leu	Asp	Val	тгр 100	Asn	Met	Arg	Leu	Val 105	Phe	Phe	Phe	Gly	Val 110	Ser	Ile
Ile	Leu	Val 115	Leu	Gly	Ser	Thr	Phe 120	Val	Ala	туr	Leu	Pro 125	Asp	Tyr	Arg
Сув	Thr	Gly	Cys	Pro	Arg	Ala	Trp	Asp	Gly	Met	Lys	Glu	Trp	Ser	Arg

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Ile Met Glu Ser Asn Cys Phe Asp Pro Ser Lys Ile Gln Leu Pro Glu 165 170 175

Asp Glu

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<212> PRT

<213> Homo sapiens

<400> 1391

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His Val Tyr Gly Leu Phe Asn Phe His Val Pro Tyr Cys Pro Leu Pro 35 40 45

Ala Val Ala Lys Ala Ser Cys Phe Ser Pro Thr Glu Glu Thr Val Leu 50 55 60

Cys His Asp Asp Arg Ala Leu Leu Gly Leu Val Phe Leu Val Phe Pro 65 70 75 80

Phe Trp Gln Cys Gly Leu Gln Glu Leu Asp Val Tyr Ala Gln Gly Ile 85 90 95

Glu Phe Thr Leu Lys Leu Gly Asn Gly Val Phe Asn Leu Cys Ser Cys 100 105 110

Leu Phe Ile Leu Leu Phe Ile Phe Cys His Pro Ala Leu Tyr Trp Ala 115 120 125

Asn Asn Glu Ile Lys 130

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<211> 401

<212> PRT

<213> Homo sapiens

WO 00/55350

< 40	00> 1	1392													
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Trp	Glu	ı Gly	Gly 20	Tyr	Glu	Arg	Thr	Trp 25	Glu	Ile	Leu	Lys	Gl: 30		Glu
Ser	Gly	Ser 35	Leu	Lys	Ala	Thr	Ile 40		Asp	Ile	Leu	Phe 45		a Ala	Lys
Arg	Lys 50	Arg	Val	Phe	Glu	His 55	His	Gly	Gln	Val	Arg 60		Gly	Met	Met
Arg 65	His	Leu	Tyr	Val	Val 70	Val	Asp	Gly	Ser	Arg 75	Thr	Met	Glu	Asp	Gln 80
Asp	Leu	Lys	Pro	Asn 85	Arg	Leu	Thr	Суз	Thr 90	Leu	Lys	Leu	Leu	Glu 95	Tyr
Phe	Val	Glu	Glu 100	Tyr	Phe	Asp	Gln	Asn 105	Pro	Ile	Ser	Gln	Ile 110	Gly	lle
Ile	Val	Thr 115	Lys	Ser	Lys	Arg	Ala 120	Glu	Lys	Leu	Thr	Glu 125	Leu	Ser	Gly
Asn	Pro 130	Arg	Lys	His	Ile	Thr 135	Ser	Leu	Lys	Lys	Ala 140	Val	Asp	Met	Thr
Cys 145	His	Gly	Glu	Pro	Ser 150	Leu	Tyr	Asn	Ser	Leu 155	Ser	Ile	Ala	Met	Gln 160
Thr	Leu	Lys	His	Met 165	Pro	Gly	His	Thr	Ser 170	Arg	Glu	Val	Leu	Ile 175	Ile
Phe	Ser	Ser	Leu 180	Thr	Thr	Суѕ	Asp	Pro 185	Ser	Asn	Ile	Tyr	Asp 190	Leu	Ile
Lys	Thr	Leu 195	Lys	Ala	Ala		Ile 200	Arg	Val	Ser	Val	Ile 205	Gly	Leu	Ser
Ala	Glu 210	Val	Arg	Val		Thr 215	Val	Leu	Ala		Glu 220	Thr	Gly	Gly	Thr
Tyr 225	His	Val	Ile		Asp (	Glu	Ser	His		Lys 235	Glu	Leu	Leu	Thr	His 240
His	Val	Ser		Pro :	Pro i	Ala	Ser		Ser 250	Ser	Glu	Сув	Ser	Leu 255	Ile

Arg Met Gly Phe Pro Gln His Thr Ile Ala Ser Leu Ser Asp Gln Asp

				-											
			260	)				265	5				270	)	
Ala	Lys	Pro 275	Ser	Phe	Ser	Met	Ala 280		. Le	ı Asp	Gly	Asr 285		Glu	ı Pro
Gly	Leu 290	Thr	Leu	Gly	Gly	Tyr 295		Суз	Pro	Glm	Cys 300		, Ala	Lys	Tyr
Cys 305	Glu	Leu	Pro	Val	Glu 310		Lys	Ile	. Cys	Gly 315		Thr	Leu	val	. Ser 320
Ala	Pro	His	Leu	Ala 325	Arg	Ser	Tyr	His	His 330		Phe	Pro	Leu	Asp 335	Ala
Phe	Gln	Glu	Ile 340	Pro	Leu	Glu	Glu	Туг 345		Gly	Glu	Arg	Phe 350		Tyr
Gly	Cys	Gln 355	Gly	Glu	Leu	Lys	Asp 360	Gln	His	Val	туг	Val 365		Ala	Val
Суз	Gln 370	Asn	Val	Phe	Cys	Val 375	Asp	Cys	Asp	Val	Phe 380	Val	His	Asp	Ser
Leu 385	His	Cys	Cys	Pro	Gly 390	Cys	Ile	His	Lys	Ile 395	Pro	Ala	Pro	Ser	Gly 400
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Ala	Ser	Ser	Pro 20	Ser	Pro	Ser	Phe	Pro 25	Ala	Ser	Arg	Pro	Trp 30	Ala	Ala
Val	Gly	Thr 35	Met	Ala	Ala	Ala	Ala 40	Ala	Ala	Gly	Pro	Ser 45	Pro	Gly	Ser
Gly	Pro 50	Gly	Asp	Ser	Pro	Glu 55	Gly	Pro	Glu	Gly	Glu 60	Ala	Pro	Glu	Arg

Arg Arg Lys Ala His Gly Met Leu Lys Leu Tyr Tyr Gly Leu Ser Glu 65 . 70 . 75 . 80

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Gly Glu Ala Ala Gly Arg Pro Ala Gly Pro Asp Pro Leu Asp Pro Thr Asp Leu Asn Gly Ala His Phe Asp Pro Glu Val Tyr Leu Asp Lys Leu 105 Arg Arg Glu Cys Pro Leu Ala Gln Leu Met Asp Ser Glu Thr Asp Met 115 120 Val Arg Gln Ile Arg Ala Leu Asp Ser Asp Met Gln Thr Leu Val Tyr 135 Glu Asn Tyr Asn Lys Phe Ile Ser Ala Thr Asp Thr Ile Arg Lys Met 150 155 Lys Asn Asp Phe Arg Lys Met Glu Asp Glu Met Asp Arg Leu Ala Thr 170 Asn Met Ala Val Ile Thr Asp Phe Ser Ala Arg Ile Ser Ala Thr Leu 180 185 Gln Asp Arg His Glu Arg Ile Thr Lys Leu Ala Gly Val His Ala Leu Leu Arg Lys Leu Gln Phe Leu Phe Glu Leu Pro Ser Arg Leu Thr Lys 215 Cys Val Glu Leu Gly Ala Tyr Gly Gln Ala Val Arg Tyr Gln Gly Arg 225 Ala Gln Ala Val Leu Gln Gln Tyr Gln His Leu Pro Ser Phe Arg Ala 250 Ile Gln Asp Asp Cys Gln Val Ile Thr Ala Arg Leu Ala Gln Gln Leu 260 Arg Gln Arg Phe Arg Glu Gly Gly Ser Gly Ala Pro Glu Gln Ala Glu Cys Val Glu Leu Leu Ala Leu Gly Glu Pro Ala Glu Glu Leu Cys 290 295 Glu Glu Phe Trp Arg Thr Pro Ala Ala Gly Trp Arg Arg Ser 305 310 315

<210> 1394

<211> 1285

<212> PRT

<213> Homo sapiens

<400> 1394

Phe Ser Phe Pro Leu Ser Ser Glu Pro Phe Gln Gly Ser Tyr Lys Val

Val Val Gln Lys Lys Ser Gly Gly Arg Thr Glu His Pro Phe Thr Val 20 25 30

Glu Glu Phe Val Leu Pro Lys Phe Glu Val Gln Val Thr Val Pro Lys 35 40 45

Ile Ile Thr Ile Leu Glu Glu Met Asn Val Ser Val Cys Gly Leu  $50 \hspace{1cm} 55 \hspace{1cm} 60 \hspace{1cm}$ 

Tyr Thr Tyr Gly Lys Pro Val Pro Gly His Val Thr Val Ser Ile Cys
65 70 75 80

Arg Lys Tyr Ser Asp Ala Ser Asp Cys His Gly Glu Asp Ser Gln Ala 85 90 95

Phe Cys Glu Lys Phe Ser Gly Gln Leu Asn Ser His Gly Cys Phe Tyr 100 105 110

Gln Gln Val Lys Thr Lys Val Phe Gln Leu Lys Arg Lys Glu Tyr Glu 115 120 125

Met Lys Leu His Thr Glu Ala Gln Ile Gln Glu Glu Gly Thr Val Val 130 135 140

Glu Leu Thr Gly Arg Gln Ser Ser Glu Ile Thr Arg Thr Ile Thr Lys
145 150 155 160

Leu Ser Phe Val Lys Val Asp Ser His Phe Arg Gln Gly Ile Pro Phe 165 170 175

Phe Gly Gln Val Arg Leu Val Asp Gly Lys Gly Val Pro Ile Pro Asn 180 185 190

Lys Val Ile Phe Ile Arg Gly Asn Glu Ala Asn Tyr Tyr Ser Asn Ala 195 200 205

Thr Thr Asp Glu His Gly Leu Val Gln Phe Ser Ile Asn Thr Thr Asn 210 215 220

Val Met Gly Thr Ser Leu Thr Val Arg Val Asn Tyr Lys Asp Arg Ser 225 230 235 240

Pro Cys Tyr Gly Tyr Gln Trp Val Ser Glu Glu His Glu Glu Ala His 245 250 255

Hi	s Th	r Ala	260	Leu	val	. Phe	Ser	Pro 265		Lys	Ser	Phe	270		s Leu
Gl	u Pr	275	s Ser	His	Glu	Leu	Pro 280		Gly	' His	Thr	Glr 285		Val	Glr
Al	a His 290	s Tyr	: Ile	Leu	Asn	Gly 295		Thr	Leu	Leu	Gly 300		Lys	Lys	Leu
S <b>e</b> 30	r Phe	э Туг	туг	Leu	11e 310	Met	Ala	Lys	Gly	Gly 315		Val	Arg	Thr	Gly 320
Th	r His	Gly	' Leu	Leu 325		Lys	Gln	Glu	Asp 330		Lys	Gly	His	Phe	
11	e Sei	: Ile	9ro 340	Val	Lys	Ser	Asp	Ile 345	Ala	Pro	Val	Ala	Arg 350	Leu	Leu
11	e Tyr	355	Val	Leu	Pro	Thr	Gly 360	Asp	Val	Ile	Gly	Asp 365		Ala	Lys
Ty	370		Glu	Asn	Cys	Leu 375	Ala	Asn	Lys	Val	Asp 380	Leu	Ser	Phe	Ser
Pro 38		Gln	Ser	Leu	Pro 390	Ala	Ser	His	Ala	His 395	Leu	Arg	Val	Thr	Ala 400
Ala	a Pro	Gln	Ser	Val 405	Cys	Ala	Leu	Arg	Ala 410	Val	Asp	Gln	Ser	Val 415	Leu
Let	ı Met	Lys	Pro 420	Asp	Ala	Glu	Leu	Ser 425	Ala	Ser	Ser	Val	Tyr 430	Asn	Leu
Leu	Pro	Glu 435	Lys	Asp	Leu	Thr	Gly 440	Phe	Pro	Gly	Pro	Leu 445	Asn	Asp	Gln
Asp	450		Asp	Cys	Ile	Asn 455	Arg	His	Asn	Val	Tyr 460	Ile	Asn	Gly	Ile
Thr 465	Tyr	Thr	Pro	Val	Ser 470	Ser	Thr	Asn	Glu	Lys 475	Asp	Met	Tyr	Ser	Phe 480
Leu	Glu	Asp	Met	Gly 485	Leu	Lys	Ala	Phe	Thr 490	Asn	Ser	Lys	Ile	Arg 495	Lys
Pro	Lys	Met	Cys 500	Pro	Gln	Leu		Gln 505	Tyr	Glu	Met	His	Gly 510	Pro	Glu
Gly	Leu	Arg 515	Val	Gly	Phe	Tyr	Glu 520	Ser	Asp	Val	Met	Gly 525	Arg	Gly	His

А	lla	530	Leu	ı Val	. His	s Val	. Glu 535		Pro	) His	Thr	540		· Val	L Aro	J Lys
T 5	'yr 45	Phe	Pro	Glu	Thr	7rp		Trp	Asp	Leu	Val 555		. Val	. Asr	ser	Ala 560
G	ly	Val	Ala	Glu	Val 565		Val	Thr	Val	Pro 570	Asp	Thr	Ile	Thr	575	
L	ys	Ala	Gly	Ala 580		Cys	Leu	Ser	Glu 585		Ala	Gly	Leu	Gly 590		Ser
s	er	Thr	Ala 595		Leu	Arg	Ala	Phe 600		Pro	Phe	Phe	Val 605		Leu	Thr
M	et	Pro 610	Tyr	Ser	Val	Ile	Arg 615		Glu	Ala	Phe	Thr 620		Lys	Ala	Thr
6	25					630					Val 635					640
					645					650					655	
				660					665		Val			670		
			675					680			Val		685			
		690					695				Pro	700				
7(	05					710					Leu 715					720
					725					730	Leu				735	
				740					745		Pro			750		
			755					760			Gly		765			
		770					775				Met	780				
G1 78		Gln	Asn	Met	Val	Leu 790	Phe	Ala	Pro	Asn	Ile 795	Tyr	Val	Leu	Asp	Tyr 800

Lei	ı Ası	n Glu	ı Thi	61 Gl	n Glr	) Le	ı Thr	Pro	810		Lys	Ser	Lys	815	lle
Gly	7 Туг	Leu	820	Thr	Gly	туг	Gln	825		Leu	Asn	Туг	E Lys 830		туг
Asp	Gly	Ser 835	Туг	Ser	Thr	Phe	Gly 840	Glu	Arg	Туг	Gly	Arg 845		Gln	Gly
Asn	850	Trp	Lev	Thr	Ala	Phe 855		Leu	Lys	Thr	Phe 860		Gln	Ala	Arg
Ala 865	Туг	Ile	Phe	: Ile	870		Ala	His	Ile	Thr 875		Ala	Leu	Ile	Trp 880
Leu	Ser	Gln	Arg	Gln 885	Lys	Asp	Asn	Gly	Cys 890		Arg	Ser	Ser	Gly 895	Ser
Leu	Leu	Asn	900	Ala	Ile	Lys	Gly	Gly 905	Val	Glu	Asp	Glu	Val 910	Thr	Leu
Ser	Ala	туг 915	Ile	Thr	Ile	Ala	Leu 920	Leu	Glu	Ile	Pro	Leu 925	Thr	Val	Thr
His	Pro 930	Val	Val	Arg	Asn	Ala 935	Leu	Phe	Cys	Leu	Glu 940	Ser	Ala	Trp	Lys
Thr 945	Ala	Gln	Glu	Gly	Asp 950	His	Gly	Ser	His	Val 955	Tyr	Thr	Lys	Ala	Leu 960
Leu	Ala	Tyr	Ala	Phe 965	Ala	Leu	Ala	Gly	Asn 970	Gln	Asp	Lys	Arg	Lys 975	Glu
Val	Leu	Lys	Ser 980	Leu	Asn	Glu	Glu	Ala 985	Val	Lys	Lys	Asp	Asn 990	Ser	Val
His	Trp	Glu 9 <b>9</b> 5	Arg	Pro	Gln		Pro 1000	Lys	Ala	Pro		Gly 005	His	Phe	Tyr
Glu	Pro 1010	Gln	Ala	Pro		Ala 015	Glu	Val	Glu		Thr 020	Ser	Tyr	Val	Leu
Leu 025	Ala	Tyr	Leu		Ala 1030	Gln	Pro	Ala		Thr 035	Ser	Glu	Asp		Thr 040
Ser	Ala	Thr		Ile .045	Val	Lys	Trp		Thr 050	Lys	Gln	Gln		Ala 055	Gln
Gly	Gly	Phe	Ser	Ser	Thr	Gln	Asp	Thr	Val	Val	Ala	Leu	His .	Ala.	Leu

1070

Ser Lys Tyr Gly Ala Ala Thr Phe Thr Arg Thr Gly Lys Ala Ala Gln 1075 1080 1085

Val Thr Ile Gln Ser Ser Gly Thr Phe Ser Ser Lys Phe Gln Val Asp 1090 1095 1100

Asn Asn Asn Arg Leu Leu Gln Gln Val Ser Leu Pro Glu Leu Pro 105 1110 1115 1120

Gly Glu Tyr Ser Met Lys Val Thr Gly Glu Gly Cys Val Tyr Leu Gln 1125 1130 1135

Thr Ser Leu Lys Tyr Asn Ile Leu Pro Glu Lys Glu Glu Phe Pro Phe 1140 1145 1150

Ala Leu Gly Val Gln Thr Leu Pro Gln Thr Cys Asp Glu Pro Lys Ala 1155 1160 1165

His Thr Ser Phe Gln Ile Ser Leu Ser Val Ser Tyr Thr Gly Ser Arg 1170 1180

Ser Ala Ser Asn Met Ala Ile Val Asp Val Lys Met Val Ser Gly Phe 185 1190 1195 1200

Ile Pro Leu Lys Pro Thr Val Lys Met Leu Glu Arg Ser Asn His Val 1205 1210 1215

Ser Arg Thr Glu Val Ser Ser Asn His Val Leu Ile Tyr Leu Asp Lys 1220 1225 1230

Val Ser Asn Gln Thr Leu Ser Leu Phe Phe Thr Val Leu Gln Asp Val 1235 1240 1245

Pro Val Arg Asp Leu Lys Pro Ala Ile Val Lys Val Tyr Asp Tyr Tyr 1250 1260

Glu Thr Asp Glu Phe Ala Ile Ala Glu Tyr Asn Ala Pro Cys Ser Lys 265 1270 1275 1280

Asp Leu Gly Asn Ala 1285

<210> 1395

<211> 75

<212> PRT

<213> Homo sapiens

<400> 1395

Ile Thr Lys Asn Ile Tyr Ser Asp Leu Lys Asp Leu Ser Ala Lys Asn

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1463

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Gli	n Se	r Il	e Se	r Cys	s Pro	Sei	r Ile	∋ Ile 25		l His	5 Ala	а Суз	Let		ı Leu
Phe	Th:	r Cy:	s Sei	r Sei	r Ala	Glr	Thr 40		. Sei	r Asr	Lei	Gl <sub>3</sub>		Pro	Phe
Gly	7 Ala 50	a Asp	Lys	з Туг	Ser	Ser 55	Ala	Phe	Sei	Pro	Glr 60		. Tyr	Asr	Asp
Phe 65	Asr	ı Ile	Pro	) Lys	70		Gly	Ile	Ser	Glu 75					
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	2> F														
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Val	Pro	Gly	Cys 20	Leu	Pro	Val	Leu	Ala 25	Ala	Ala	Gly	Arg	Ala 30	Arg	Gly
Arg	Ala	Glu 35	Val	Leu	Ile	Ser	Thr 40	Val	Gly	Pro	Glu	Asp 45	Cys	Val	Val
Pro	Phe 50	Leu	Thr	Arg	Pro	Lys 55	Val	Pro	Val	Leu	Gln 60	Leu	Asp	Ser	Gly
Asn 65	Tyr	Leu	Phe	Ser	Thr 70	Ser	Ala	Ile	Суз	Arg 75	Tyr	Phe	Phe	Leu	Leu 80
Ser	Gly	Trp	Glu	Gln 85	Asp	Asp	Leu	Thr	Asn 90	Gln	Trp	Leu	Glu	Trp 95	Glu
Ala	Thr	Glu	Leu 100	Gln	Pro	Ala	Leu	Ser 105	Ala	Ala	Leu	Tyr	Tyr 110	Leu	Val
Val	Gln	Gly 115	Lys	Lys	Gly	Glu	<b>Asp</b> 120	Val	Leu	Gly	Ser	Val 125	Arg	Arg	Ala
Leu	Thr 130	His	Ile	Asp	His	Ser 135	Leu	Ser	Arg		Asn 140	Cys	Pro	Phe	Leu
Ala 145	Gly	Glu	Thr	Glu	Ser :	Leu	Ala	Asp	Ile	Val 155	Leu	Trp	Gly		Leu 160

1

Tyr	Pro	Leu	Leu	Gln 165	Asp	Pro	Ala	Tyr	Leu 170		Glu	Glu	Leu	Ser 175	
Leu	His	Ser	Trp 180	Phe	Gln	Thr	Leu	Ser 185	Thr	Gln	Glu	Pro	Cys 190	Gln	Arg
Ala	Ala	Glu 195	Thr	Val	Leu	Lys	Gln 200	Gln	Gly	Val	Leu	Ala 205		Arg	Pro
Tyr	Leu 210	Gln	Lys	Gln	Pro	Gln 215	Pro	Ser	Pro	Ala	Glu 220	Gly	Arg	Ala	Val
Thr 225		Glu	Pro	Glu	Glu 230	Glu	Glu	Leu	Ala	Thr 235	Leu	Ser	Glu	Glu	Glu 240
Ile	Ala	Met	Ala	Val 245	Thr	Ala	Trp	Glu	Lys 250	Gly	Leu	Glu	Ser	Leu 255	Pro
Pro	Leu	Arg	Pro 260	Gln	Gln	Asn	Pro	Val 265	Leu	Pro	Val	Ala	Gly 270	Glu	Arg
Asn	Val	Leu 275	Ile	Thr	Ser	Ala	Leu 280	Pro	Tyr	Val-	Asn	Asn 285	Val	Pro	His
Leu	Gly 290	Àsn	Ile	Ile	Gly	Cys 295	Val	Leu	Ser	Ala	Asp 300	Val	Phe	Ala	Arg
Tyr 305	Ser	Arg	Leu	Arg	Gln 310	Trp	Asn	Thr	Leu	Tyr 315	Leu	Cys	Gly	Thr	Asp 320
				325				-	330				-	335	Thr
			340		_	_	_	345					350		Tyr
		355			Ser		360					365			
	370		-		Thr	375	-				380			-	-
385					Asp 390					395					400
				405	Asp	_			410	Ī	• =			415	•
Gly	Tyr	Glu	Glu 420	Ala	Arg	Gly	Asp	Gln 425	Cys	Asp	Lys	Cys	Gly 430	Lys	Leu

	Ile	Asn	Ala 435		Glu	Leu	Lys	Lys 440		Gln	Cys	Lys	Val 445		Arq	j Se:
	Суѕ	Pro 450		Val	Gln	Ser	Ser 455		His	Leu	Phe	Leu 460		Leu	Pro	Lys
	Leu 465	Glu	Lys	Arg	Leu	Glu 470		Trp	Leu	Gly	Arg 475		Leu	Pro	Gly	Se:
	Asp	Trp	Thr	Pro	Asn 485	Ala	Gln	Phe	Ile	Thr 490	Arg	Ser	Trp	Leu	Arg 495	
	Gly	Leu	Lys	Pro 500		Cys	Ile	Thr	Arg 505	Asp	Leu	Lys	Trp	Gly 510		Pro
,	Val	Pro	Leu 515	Glu	Gly	Phe	Glu	Asp 520	Lys	Val	Phe	Tyr	Val 525	Trp	Phe	Asp
	Ala	Thr 530	Ile	Gly	туг	Leu	Ser 535	Ile	Thr	Ala	Asn	Tyr 540	Thr	Asp	Gln	Trp
	Glu 545	Arg	Trp	Trp	Lys	Asn 550	Pro	Glu	Gln	Val	Asp 555	Leu	Туг	Gln	Phe	Met 560
1	Ala	Lys	Asp	Asn	Val 565	Pro	Phe	His	Ser	Leu 570	Val	Phe	Pro	Cys	Ser 575	
1	Leu	Gly	Ala	Glu 580	Asp	Asn	Tyr	Thr	Leu 585	Val	Ser	His	Leu	Ile 590	Ala	Thr
C	Glu	туг	Leu 595	Asn	Tyr	Glu	Asp	Gly 600	Lys	Phe	Ser	Lys	Ser 605	Arg	Gly	Val
C	Sly	Val 610	Phe	Gly	Asp	Met	Ala 615	Gln	Asp	Thr	Gly	11e 620	Pro	Ala	Asp	Ile
	7rp 525	Arg	Phe	Туr	Leu	Leu 630	Tyr	Ile	Arg	Pro	Glu 635	Gly	Gln	Asp	Ser	Ala 640
F	he	Ser	Trp	Thr	Asp 645	Leu	Leu	Leu	Lys	Asn 650	Asn	ser	Glu	Leu	Leu 655	Asn
P	sn	Leu	Gly	Asn 660	Phe	Ile	Asn	Arg	Ala 665	Gly	Met	Phe	Val	Ser 670	Lys	Phe
P	he	Gly	Gly 675	Tyr	Val	Pro	Glu	Met 680	Val	Leu	Thr	Pro	Asp 685	Asp	Gln	Arg
L		Leu 690	Ala	His	Val	Thr	Leu 695	Glu	Leu	Gln	His	Tyr 700	His	Gln	Leu	Leu

Glu 705	Lys	Val	Arg	Ile	Arg 710	Asp	Ala	Leu	Arg	Ser 715	Ile	Leu	Thr	Ile	Ser 720
Arg	His	Gly	Asn	Gln 725	Tyr	Ile	Gln	Val	Asn 730	Glu	Pro	Trp	Lys	Arg 735	Ile
Lys	Gly	Ser	Glu 740	Ala	Asp	Arg	Gln	Arg 745	Ala	Gly	Thr	Val	Thr 750	Gly	Leu
Ala	Val	Asn 755	Ile	Ala	Ala	Leu	Leu 760	Ser	Val	Met	Leu	Gln 765	Pro	Tyr	Met

Pro Thr Val Ser Ala Thr Ile Gln Ala Gln Leu Gln Leu Pro Pro Pro 770 775

Ala Cys Ser Ile Leu Leu Thr Asn Phe Leu Cys Thr Leu Pro Ala Gly 790

His Gln Ile Gly Thr Val Ser Pro Leu Phe Gln Lys Leu Glu Asn Asp 805

Gln Ile Glu Ser Leu Arg Gln Arg Phe Gly Gly Gln Ala Lys Thr 820 825

Ser Pro Lys Pro Ala Val Val Glu Thr Val Thr Thr Ala Lys Pro Gln 840

Gln Ile Gln Ala Leu Met Asp Glu Val Thr Lys Gln Gly Asn Ile Val 855

Arg Glu Leu Lys Ala Gln Lys Ala Asp Lys Asn Glu Val Ala Ala Glu 865 870

Val Ala Lys Leu Leu Asp Leu Lys Lys Gln Leu Ala Val Ala Glu Gly 890

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Leu Ile Glu Ser His Phe Asn Arg 915

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<211> 476

<212> PRT

<213> Homo sapiens

<220>

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Lys	Met	Ala	Ala	Leu	Thr	Thr	Leu	Phe	Lys	Tyr	Ile	Asp	Glu	Asn	Glr
1				5					10			_		15	
Asp	Arg	Tvr	Ile	Lvs	Lvs	Leu	Ala	Lvs	Tro	Val	Ala	Ile	Gln	Ser	Va l
•		- 4	20	-1-	-1-			25					30		
Ser	Ala	Tro	Pro	Glu	Lvs	Ara	Glv	Glu	Ile	Ara	Ara	Met	Met	Glu	Val
		35			-1-	,	40			5	9	45			
Ala	Ala	Ala	Asp	Val	Lvs	Gln	T.eu	Glv	Glv	Ser	Va 1	Glu	Len	Val	Acr
	50				-,-	55		1	1		60				
											•				
Tle	Glv	T.VS	Gln	T.VS	Len	Pro	Asn	Glv	Ser	Glu	Tla	Pro	Len	Pro	Dro
65	,	-1-		-,-	70			01,	001	75	110		200		80
					. •										
Ile	Leu	Leu	Gly	Ara	Len	Glv	Ser	Asn	Pro	Gln	T.ve	T.VS	Thr	Val	Cve
			,	85		,			90		2,5	<b></b> , 5	1111	95	<b>- J - J</b>
				•••					,,					,,	
Tle	ጥህዮ	Glv	His	T.e.u	Asn	Val	Gla	Pro	Δla	Δla	T Au	Glu	) en	Gly	Tro
	-1-		100		wab		GIII	105	nia	nia	Deu	GIU	110	Gry	115
			100					103					110		
Aen	Ser	Glu	Pro	Dhe	Thr.	T Au	u a l	Clu	A = a	n a n	C1	T	T 011	V	C1
		115		1 1.0		Бец	120	Glu	ALG	vəb	Gry	125	Leu	лаа	Gry
							120					123			
Ara	Glv	Ser	Thr	Asn	Δen	t.ve	Gly	Pro	t/a l	Δla	Glv	Trn	Tla	Acn	Δla
9	130		****	ng p	usb	135	Gry	110	• 441	AIG	140	11.5	110	no	пта
	130					133					140				
Leu	Glu	Δla	Tyr	Gla	Tue	Th-	CI.	Cln	Gl.	Tla	Dro	Ual	n-n	Wal	2
145	Olu	nia	171	GIII	150	1111	GLY	GIII	Gru	155	FIU	vai	VPII	vaı	160
143					130					133					100
Dha	Cue	T au	G) ii	C1.	Wot	C1	C1	c	~1	5 A =	c1	~1··	T 0.11	7.00	c1
rne	Cys	Leu	Glu	165	Mec	GIU	GIU	ser	170	261	GIU	GIY	Leu	175	GIU
				103					1/0					1/5	
T AU	T10	Dhe	<b>31</b> -	N-0	T		mb-	Dha	Dho	T	100	1101		m	1701
Leu	116	FILE	Ala 180	Arg	гуз	ASP	IIIL	185	Pne	Lys	wsb	vai	190	Tyt	vai
			100					100					190		
c	T1.	c	3		m	m	<b>.</b>	<b>a</b> 1	•	•	•	D	<b></b>	<b>-</b> 1-	<b></b>
cys	116		Asp	ASD	Tyr	TIP		GIY	Lys	Lys	Lys		cys	TTE	Thr
		195					200					205			
m	<b>a</b> 1	<b>.</b>					_			_,				_	_
ryr		Leu	Arg	Gly	He		Tyr	Phe	Phe	Ile		Val	GLu	Cys	Ser
	210					215					220				
<b>.</b>	•					-1		_	٠.		_				
	rys	Asp	Leu	His		Gly	Val	Tyr	Gly		Ser	Val	His	Glu	
225					230					235					240
	<b>m</b> t -		LAU	_,		_			_	_			_	_	
Me T	UDT	ASD	1.011	110	1.011	(.A11	MOT	C 1 3 F	SAT	I OII	1/a 1	Acn	1170	Ara	C 1 11

				245	•				250	)				255	
Asn	Ile	Leu	11e 260		Gly	Ile	Asn	Glu 265		val	. Ala	Ala	Val 270		Gl
Glu	Glu	His 275	Lys	Leu	Туг	Asp	Asp 280		: Asp	Phe	e Asp	285		Glu	Phe
Ala	Lys 290		Val	Gly	Ala	Gln 295		Leu	Leu	His	Ser 300		Lys	Lys	Asp
Ile 305	Leu	Met	His	Arg	Trp 310		Tyr	Pro	Ser	Leu 315		Leu	His	Gly	11e 320
Glu	Gly	Ala	Phe	Ser 325	Gly	Ser	Gly	Ala	Lys 330		Val	Ile	Pro	Arg 335	Lys
Val	Val	Gly	Lys 340	Phe	Ser	Ile	Arg	Leu 345	Val	Pro	Asn	Met	Thr 350	Pro	Glu
		355	Glu				360	÷				365			
	370		Pro			375					380				
385			Ser		390					395					400
			Thr	405					410					415	
Gly	Ser	Ile	Pro 420	Val	Thr	Leu	Thr	Phe 425	Gln	Glu	Ala	Thr	Gly 430	Lys	Asn
		435	Leu				440					445			
Asn	Glu 450	Lys	Leu	Asn	Arg	Tyr 455	Asn	Tyr	Ile	Glu	Gly 460	Thr	Lys	Met	Leu
Ala 465	Ala	Tyr	Leu	Tyr	Glu 470	Val	Ser	Gln	Leu	Lys 475	Asp				

<210> 1398

<211> 187

<212> PRT

<213> Homo sapiens

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Ser Ser Val Val Ser Gln Arg Leu Thr Glu Ser Pro Cys Ala Leu Val
             20
Ala Ser Gln Tyr Gly Trp Ser Gly Asn Met Glu Arg Ile Met Lys Ala
                             40
Gln Ala Tyr Gln Thr Gly Lys Asp Ile Ser Thr Asn Tyr Tyr Ala Ser
                        55
Gln Lys Lys Thr Phe Glu Ile Asn Pro Arg His Pro Leu Ile Arg Asp
                                         75
Met Leu Arg Arg Ile Lys Glu Asp Glu Asp Asp Lys Thr Val Leu Asp
                85
                                     90
Leu Ala Val Val Leu Phe Glu Thr Ala Thr Leu Arg Ser Gly Tyr Leu
Leu Pro Asp Thr Lys Ala Tyr Gly Asp Arg Ile Glu Arg Met Leu Arg
                          120
Leu Ser Leu Asn Ile Asp Pro Asp Ala Lys Val Glu Glu Glu Pro Glu
Glu Glu Pro Glu Glu Thr Ala Glu Asp Thr Thr Glu Asp Thr Glu Gln
                   150
                                       155
Asp Glu Asp Glu Glu Met Asp Val Gly Thr Asp Glu Glu Glu Glu Thr
               165
Ala Lys Glu Ser Thr Ala Glu Lys Asp Glu Leu
           180
                               185
<210> 1399
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Lys Ser Ser Thr Gly Val Ile Pro Asp Glu Ala Lys Ala Leu Ser Leu

<211> 376 <212> PRT

<400> 1399

<213> Homo sapiens

1				5					10	)				15	5
Leu	Ala	Pro	Ala 20		Ala	Val	. Ala	Gly 25		Leu	Pro	Gly	Gly 30		, Lei
Leu	Pro	Thr 35	Pro	Asn	Pro	Leu	Thr 40		lle	Gly	' Ala	Val 45		Leu	Ala
Ala	Leu 50	Gly	Ala	Pro	Thr	Leu 55	-	Pro	Ala	Leu	Ala 60		Leu	Gly	Leu
Pro 65	Gly	Ala	Asn	Leu	Asn 70		Gln	Ser	Leu	Ala 75		Asp	Gln	Leu	Leu 80
Lys	Leu	Met	Ser	Thr 85	Val	Asp	Pro	Lys	Leu 90		His	Val	Ala	Ala 95	_
Leu	Val	Ser	Pro 100	Ser	Leu	Lys	Ser	Asp 105		Ser	Ser	Lys	Glu 110		Glu
Glu	Ala	Met 115	Lys	Arg	Val	Arg	Glu 120	Ala	Gln	Ser	Leu	11e 125		Ala	Ala
Ile	Glu 130	Pro	Asp	Lys	Lys	Glu 135	Glu	Lys	Arg	Arg	His 140	Ser	Arg	Ser	Arg
Ser 145	Arg	Ser	Arg	Arg	Arg 150	Arg	Thr	Pro	Ser	Ser 155	Ser	Arg	His	Arg	Arg 160
Ser	Arg	Ser	Arg	Ser 165	Arg	Arg	Arg	Ser	His 170	Ser	Lys	Ser	Arg	Ser 175	Arg
Arg	Arg	Ser	Lys 180	Ser	Pro	Arg	Arg	Arg 185	Arg	Ser	His	Ser	Arġ 190	Glu	Arg
Gly	Arg	Arg 195	Ser	Arg	Ser	Thr	Ser 200	Lys	Thr	Arg	Asp	Lys 205	Lys	Lys	Glu
Asp	Lys 210	Glu	Lys	Lys	Arg	Ser 215	Lys	Thr	Pro	Pro	Lys 220	Ser	Tyr	Ser	Thr
Ala 225	Arg	Arg	Ser	Arg	Ser 230	Ala	Ser	Arg	Glu	Arg 235	Arg	Arg	Arg	Arg	Ser 240
Arg	Ser	Gly	Thr	Arg 245	Ser	Pro	Lys	Lys	Pro 250	Arg	Ser	Pro	Lys	Arg 255	Lys
Leu	Ser	Arg	Ser 260	Pro	Ser	Pro	Arg	Arg 265	His	Lys	Lys	Glu	Lys 270	Lys	Lys
asA	Lvs	asp	Lvs	Glu	Ara	Ser	Ara	Asp	Glu	Arα	Glu	Ara	Ser	Thr	Ser

1471

275 280 285 Lys Lys Lys Ser Lys Asp Lys Glu Lys Asp Arg Glu Arg Lys Ser 290 295 Glu Ser Asp Lys Asp Val Lys Gln Val Thr Arg Asp Tyr Asp Glu Glu Glu Gln Gly Tyr Asp Ser Glu Lys Glu Lys Lys Glu Glu Lys Lys Pro 330 Ile Glu Thr Gly Ser Pro Lys Thr Lys Glu Cys Ser Val Glu Lys Gly 340 Thr Gly Asp Ser Leu Arg Glu Ser Lys Val Asn Gly Asp Asp His His 365 Glu Glu Asp Met Asp Met Ser Asp 370 375 <210> 1400 <211> 112 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (21) <223> Xaa equals any of the naturally occurring L-amino acids <400> 1400 Thr Ala Gly Leu Thr Ser Arg Gly Trp Gly Ser Leu Pro Pro Ser Leu Glu Thr Phe Leu Xaa Trp Leu Lys Ser Arg Lys Glu Asn Glu Cys Thr Ser Arg Leu Ala Gln Ser Leu Ser Pro Ser Ser Ser Leu Phe Pro Ala 40 Gly Pro Ser Gly Leu Tyr Gly Pro Asp Gly Gly Leu Arg Lys Met Arg 50 Gly Leu Trp Phe Ser Gly Ile Pro Ala Gly Ala Thr Pro Ser Cys Leu Gln Met Val His Val Pro Ile Pro Pro Ser Arg Pro Leu Leu Cys Leu 85 90 95

Leu Cys His Arg Asp Ser Gln Gln Arg Phe Phe Phe Val Leu Ala Val

105

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<211> 69
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<213> Homo sapiens
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Arg Arg Gln Val Gly Ala Ala Ala Val Ala Met Thr Arg Gly Asn Gln
                                  10 •
Arg Glu Leu Ala Arg Gln Lys Asn Met Lys Lys Gln Ser Asp Ser Val
            20
                               25
                                                  30
Lys Gly Lys Arg Arg Asp Asp Gly Leu Ser Ala Ala Ala Arg Lys Gln
Arg Asp Ser Glu Ile Met Gln Gln Lys Gln Lys Lys Ala Asn Glu Lys
                      55
                                          60
Lys Glu Glu Pro Lys
 65
<210> 1402
<211> 177
<212> PRT
<213> Homo sapiens
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<222> (162)
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<220>
<221> SITE
<222> (166)
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<223> Xaa equals any of the naturally occurring L-amino acids

1473

<400> 1402 Arg Pro Pro Arg Arg Xaa Pro Met Asp Gly Pro Ala Ile Ile Thr Gln Val Thr Asn Pro Lys Glu Asp Glu Gly Arg Leu Pro Gly Ala Gly Glu Lys Ala Ser Gln Cys Asn Val Ser Leu Lys Lys Gln Arg Ser Arg Ser Ile Leu Ser Ser Phe Phe Cys Cys Phe Arg Asp Tyr Asn Val Glu Ala 55 Pro Pro Pro Ser Ser Pro Ser Val Leu Pro Pro Leu Val Glu Glu Asn 70 Gly Gly Leu Gln Lys Pro Pro Ala Lys Tyr Leu Leu Pro Glu Val Thr Val Leu Asp Tyr Gly Lys Lys Cys Val Val Ile Asp Leu Asp Glu Thr 100 Leu Val His Ser Ser Phe Lys Pro Ile Ser Asn Ala Asp Phe Ile Val 120 Pro Val Glu Ile Asp Gly Thr Ile His Gln Val Tyr Val Leu Lys Arg 130 135 145

Pro His Val Asp Glu Phe Leu Gln Arg Met Gly Gln Leu Leu Asn Val

Cys Xaa Leu Leu Pro Xaa Gly Gln Val Cys Arg Pro Val Ala Asp Leu 170

Leu

<210> 1403 <211> 82 <212> PRT <213> Homo sapiens

<400> 1403 Lys His Ile Leu Ser Thr Phe Glu Thr Ser Val Leu Glu Gly Arg Leu

His Lys Leu Ser Ser Pro Arg Leu Arg Arg Leu Gln Ser Gly Lys Leu 20 25 30

Thr Cys Arg Asn Gly Val Pro Phe Met Leu Tyr Leu Asp Lys Gly Asn 35 40 45

Gln Lys Trp Asn Gln Cys Arg Gln Asn Leu Gly Phe Ala Ala Ser Ile

Asn Gln Ser Met Thr Asn Arg Gly Ser Leu Lys Cys Lys Gly Thr Asn

65 70 75 80

Phe Thr

<210> 1404

<211> 251

<212> PRT

<213> Homo sapiens

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<222> (37)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (41)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 1404

Thr Thr Lys Pro Ala Thr Thr Pro Ser Ser Thr Thr Arg Thr Cys Arg

1 5 10 15

Arg Ser Pro Ser Thr Leu Pro Ser Ala Thr Trp Thr Pro Leu Ala Ser 20 25 30

Arg Thr Ala His Xaa Leu Pro Arg Xaa Tyr Met Tyr Pro Ser Met Asp 35 40 45

Gln Leu Ala Glu Met Leu Pro Gly Val Leu Gln Gln Phe Gly Leu Lys 50 55

Ser Ile Ile Gly Met Gly Thr Gly Ala Gly Ala Tyr Ile Leu Thr Arg 65 70 75 80

Phe Ala Leu Asn Asn Pro Glu Met Val Glu Gly Leu Val Leu Ile Asn 85 90 95

Val Asn Pro Cys Ala Glu Gly Trp Met Asp Trp Ala Ala Ser Lys Ile 100 105 110

Ser Gly Trp Thr Gln Ala Leu Pro Asp Met Val Val Ser His Leu Phe 120 Gly Lys Glu Glu Met Gln Ser Asn Val Glu Val Val His Thr Tyr Arg Gln His Ile Val Asn Asp Met Asn Pro Gly Asn Leu His Leu Phe Ile 150 Asn Ala Tyr Asn Ser Arg Arg Asp Leu Glu Ile Glu Arg Pro Met Pro 170 Gly Thr His Thr Val Thr Leu Gln Cys Pro Ala Leu Leu Val Val Gly 185 Asp Ser Ser Pro Ala Val Asp Ala Val Val Glu Cys Asn Ser Lys Leu 195 Asp Pro Thr Lys Thr Thr Leu Leu Lys Met Ala Asp Cys Gly Gly Leu 215 Pro Gln Ile Ser Gln Pro Ala Lys Leu Ala Glu Ala Phe Lys Tyr Phe 225 235 Val Gln Gly Met Gly Tyr Met Pro Arg Leu Ala 245 250 <210> 1405 <211> 127 <212> PRT <213> Homo sapiens <400> 1405 Phe Glu Gly Phe Tyr Ser Gly Arg Lys Asn Arg Thr Lys Val Tyr Val Pro Ser Ser Val Val Leu Ile Asp Leu Phe Phe Leu Phe Glu Thr Lys 20 Val Val Ser Val Phe Trp Phe Ser Gly Asn Met Tyr Tyr Ile Val Leu Lys Glu Cys Cys Pro Thr Asn Tyr Ser Ser Lys Gln Arg Ile Val Thr Ile Asn Lys Val Ser Val Thr Leu Leu Pro Leu Ser His Asn Ile His 70 Cys Arg Ala Leu Cys Arg Ser Lys Asn Arg Ala Ala Gln Asn Leu Cys

85 90 95 Gly Ser Phe Leu Ser Phe Cys Asn Leu Arg His Met Phe Gln Arg Thr 100 105 Gly Ile Phe Val Trp Ser Ser Asp Leu Gly Asp His Ser His Asn 120 125 <210> 1406 <211> 230 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (90) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (112) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (118) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (169) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (190) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (192) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (194) <223> Xaa equals any of the naturally occurring L-amino acids <220>

< 2 2	21> : 22> 23> :	(217		ls a	ny o:	f the	e nat	tura:	lly	occu	rrin	g L-,	amin	o ac	ids
<22 <22 <22	20> 21> 3 22>	SITE	)							occu					
< 4.0	0> 1	406													
	Glu		Pro	Leu		val	Pro	Arg	Sei 10		a Gly	glu	ı Ala	A Ala	a Pro
His	Ser	Arg	Arg 20	Pro	) Pro	Gly	Leu	Le <b>u</b> 25		o His	a Ala	Pro	Arg		a Ala
Ser	Ala	. Gln 35	Leu	Glu	Glu	Arg	Arg 40		Asp	Pro	His	Pro		Met	Thr
Leu	Gln 50	Glu	Gly	Asp	Cys	Arg 55		Ser	Glr	Thr	Val		Leu	Thr	Met
Gly 65	Thr	Ala	Asp	Ser	Asp 70	Glu	Met	Ala	Pro	Glu 75		Pro	Gln	His	Thr 80
His	Ile	Asp	Val	His 85	Ile	His	Gln	Glu	Xaa 90		Leu	Ala	Lys	Leu 95	Leu
Leu	Thr	Cys	Cys 100	Ser	Ala	Leu	Arg	Pro 105	Arg	Ala	Thr	Gln	Ala 110	Arg	Xaa
Ser	Ser	Arg 115	Leu	Leu	Xaa	Ala	Ser 120	Trp	Val	Met	Gln	Ile 125	Val	Leu	Gly
Ile	Leu 130	Ser	Ala	Val	Leu	Gly 135	Gly	Phe	Phe	туг	11e 140	Arg	Asp	туг	Thr
Leu 145	Leu	Val	Thr	Ser	Gly 150	Ala	Ala	Ser	Gly	Gln 155	Gly	Leu	Trp	Leu	Cys 160
Cys	Trp	Ser	Суѕ	Cys 165	Leu	His	Leu	Xaa	Glu 170	Thr	Gly	Trp	Tyr	Ile 175	Leu
Gly	Pro	Ala	Glu 180	Asp	Ser	Ala	Asn	Ala 185	Gly	Lys	Leu	ser	Xaa 190	Gln	Xaa
Ser	Xaa	Ala 195	Ser	Asn	Phe	Gly	Asn 200	Glu	Glu	Phe	Arg	Tyr 205	Gly	Leu	Leu
Leu	Ile 210	Thr	Thr	Ser	Gly	Trp 215	Pro	Xaa	Xaa	Gln	Val 220	Arg	Val	Asp	Trp

Asn Thr Ser Ser Pro Gln 225 <210> 1407 <211> 79 <212> PRT <213> Homo sapiens <400> 1407 Arg Gly His Phe Leu Leu Pro Asp Leu Asp Ile Pro Ser Asn Pro Ser 10 Ser Tyr Ser Met Leu Lys Glu Lys Tyr Ser Gln Met His Tyr Val Asn 25 Gly Glu Lys Lys His Ser Ile Val Glu Thr Pro Ile Leu Ala Asn Val Phe Trp Ser Val Phe His Phe Thr Val Tyr Ile Pro Ala Leu Lys Thr 55 Gln Gly Gln Val Leu Thr Lys Glu Val Cys Ser His Ser Lys Tyr 70 <210> 1408 <211> 289 <212> PRT <213> Homo sapiens Val Arg Pro Pro Ser His Val Thr Ala Asp Ser Gly Arg Ser Pro Leu Ser Leu Thr Tyr Leu Pro Leu Gln Glu Pro Gly Asp Met Ala Ala Ala 25 Val Pro Arg Ala Ala Phe Leu Ser Pro Leu Leu Pro Leu Leu Gly 35 40 Phe Leu Leu Ser Ala Pro His Gly Gly Ser Gly Leu His Thr Lys Gly Ala Leu Pro Leu Asp Thr Val Thr Phe Tyr Lys Val Ile Pro Lys 65 70 75

Ser Lys Phe Val Leu Val Lys Phe Asp Thr Gln Tyr Pro Tyr Gly Glu

1479

85 90 95 Lys Gln Asp Glu Phe Lys Arg Leu Ala Glu Asn Ser Ala Ser Ser Asp 100 Asp Leu Leu Val Ala Glu Val Gly Ile Ser Asp Tyr Gly Asp Lys Leu Asn Met Glu Leu Ser Glu Lys Tyr Lys Leu Asp Lys Glu Ser Tyr Pro Val Phe Tyr Leu Phe Arg Asp Gly Asp Phe Glu Asn Pro Val Pro Tyr 150 155 Thr Gly Ala Val Lys Val Gly Ala Ile Gln Arg Trp Leu Lys Gly Gln 165 170 Gly Val Tyr Leu Gly Met Pro Gly Cys Leu Pro Val Tyr Asp Ala Leu 180 Ala Gly Glu Phe Ile Arg Ala Ser Gly Val Glu Ala Arg Gln Ala Leu Leu Lys Gln Gly Gln Asp Asn Leu Ser Ser Val Lys Glu Thr Gln Lys 215 Lys Trp Ala Glu Gln Tyr Leu Lys Ile Met Gly Lys Ile Leu Asp Gln 230 Gly Glu Asp Phe Pro Ala Ser Glu Met Thr Arg Ile Ala Arg Leu Ile 245 250 Glu Lys Asn Lys Met Ser Asp Gly Lys Lys Glu Glu Leu Gln Lys Ser Leu Asn Ile Leu Thr Ala Phe Gln Lys Lys Gly Ala Glu Lys Glu Glu 280 Leu

<210> 1409 <211> 488 <212> PRT <213> Homo sapiens

<400> 1409
Pro Ala Ser Ala Gly Thr Val Ser Glu Gly Pro Pro Gly Thr Asp Gly
1 5 10 15

Ser	Ala	a Gly	Arg 20	Gly	Gly	Thi	r Ala	a Phe		a Met	: Ala	a Ala	3 Thi		l As
Leu	Glu	Leu 35	Asp	Pro	Ile	Phe	Leu 40		3 Ala	a Leu	Gly	/ Phe		ı His	s Se
Lys	Ser 50	Lys	Asp	Ser	Ala	. Glu		Leu	Lys	s Ala	Leu 60		a Asp	Glu	ı Sei
Leu 65	Ala	. Arg	Gly	Ile	Asp 70		Ser	Туг	Arg	Pro 75		Glr	Lys	Asp	Va]
Glu	Pro	Pro	Lys	Ile 85		Ser	Thr	Lys	Asn 90	Ile	Ser	Ile	. Lys	Gln 95	
			.100	. •				105		Asn			110		
		115					120			Glu		125			
•	130					135				Asp	140				
145		-	+		150			ē		Pro 155					160
				165					170					175	
			180					185		Ala			190		
		195					200			Val		205			
	210					215				Pro	220				
225					230					Cys 235.					240
				245					250	Lys				255	
			260					265		Val			270		
yys	Lys	Pro 275	Glu	Thr	Lys	Leu	Lys 280	Gln	Glu	Thr	Thr	Phe 285	Leu	Ala	Phe

```
Lys Arg Thr Glu Val Lys Thr Ser Thr Val Ile Ser Gly Asn Ser Ser
                         295
 Ser Ala Ser Val Ser Ser Ser Val Thr Ser Gly Leu Thr Gly Trp Ala
 305
                                       315
 Ala Phe Ala Ala Lys Thr Ser Ser Ala Gly Pro Ser Thr Ala Lys Leu
                 325
                                     330
 Ser Ser Thr Thr Gln Asn Asn Thr Gly Lys Pro Ala Thr Ser Ser Ala
                                345
 Asn Gln Lys Pro Val Gly Leu Thr Gly Leu Ala Thr Ser Ser Lys Gly
         355
                             360
 Gly Ile Gly Ser Lys Ile Gly Ser Asn Asn Ser Thr Thr Pro Thr Val
                        375
Pro Leu Lys Pro Pro Pro Pro Leu Thr Leu Gly Lys Thr Gly Leu Ser
                   390
                                        395
Arg Ser Val Ser Cys Asp Asn Val Ser Lys Val Gly Leu Pro Ser Pro
                                    410
Ser Ser Leu Val Pro Gly Ser Ser Ser Gln Leu Ser Gly Asn Gly Asn
            420
Ser Gly Thr Ser Gly Pro Ser Gly Ser Thr Thr Ser Lys Thr Thr Ser
Glu Ser Ser Ser Pro Ser Ala Ser Leu Lys Gly Pro Thr Ser Gln
    450
                       455
Glu Ser Gln Leu Asn Ala Met Lys Arg Leu Gln Met Val Lys Lys Lys
                    470
                                       475
Ala Ala Gln Lys Lys Leu Lys Lys
                485
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<210> 1411 <211> 129 <212> PRT <213> Homo sapiens

50 55

Gln Gly Ile Gln Gln Leu Leu Gln Ala Glu Lys Arg Ala Ala Glu Lys 20 25 30 .

Val Ser Glu Ala Arg Lys Arg Lys Asn Arg Arg Leu Lys Gln Ala Lys 35 40 45

Glu Glu Ala Glu Ala Glu Ile Glu Gln Tyr Arg Leu Gln Arg Glu Lys
50 55 60

Glu Phe Lys Ala Lys Glu Ala Ala Ala Leu Gly Ser Arg Gly Ser Cys
65 70 75 80

Ser Thr Glu Val Glu Lys Glu Thr Gln Glu Lys Met Thr Ile Leu Gln 85 90 95

Thr Tyr Phe Arg Gln Asn Arg Asp Glu Val Leu Asp Asn Leu Leu Ala

Phe Val Cys Asp Ile Arg Pro Glu Ile His Glu Asn Tyr Arg Ile Asn 115 120 125

Gly

WO 00/55350

1483

<210> 1412 <211> 177 <212> PRT <213> Homo sapiens <400> 1412 Val Thr Val Pro Ser Ser Ser Ala Ala Gly Thr Leu Phe Gln Gly Leu Cys Gly Ala Pro Asp Ala Pro His Pro Leu Ser Lys Ile Pro Gly Gly 25 Arg Gly Gly Arg Asp Pro Ser Leu Ser Ala Leu Ile Tyr Lys Asp Glu Lys Leu Thr Val Thr Gln Asp Leu Pro Val Asn Asp Gly Lys Pro His Ile Val His Phe Gln Tyr Glu Val Thr Glu Val Lys Val Ser Ser 65 70 Trp Asp Ala Val Leu Ser Ser Gln Ser Leu Phe Val Glu Ile Pro Asp Gly Leu Leu Ala Asp Gly Ser Lys Glu Gly Leu Leu Ala Leu Leu Glu Phe Ala Glu Glu Lys Met Lys Val Asn Tyr Val Phe Ile Cys Phe Arg 120 Lys Gly Arg Glu Asp Arg Ala Pro Leu Leu Lys Thr Phe Ser Phe Leu 135 Gly Phe Glu Ile Val Arg Pro Gly His Pro Cys Val Pro Ser Arg Pro 145 Asp Val Met Phe Met Val Tyr Pro Leu Asp Gln Asn Leu Ser Asp Glu 165 170

<210> 1413 <211> 112 <212> PRT <213> Homo sapiens

Asp

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Se	r Gly	/ Let	a Ar	Lei	ı Ala	Me	t Ser	Thi	Ası	n Ası	n Met	Ser	Asp	Pro	Arg
:	l				5				10					15	
Arc	y Pro	) Asr	ı Lys	Va)	Leu	Ar	y Tyr	Lys	Pro	Pro	Pro	Ser	Glu	Cys	Asn
			20	)				25					30		
Pro	> Ala	Let	ı Asp	Asp	Pro	Thi	Pro	Asp	Туг	Met	Asn	Leu	Leu	Gly	Met
		35			•		40					45		_	
Ile	Phe	Ser	Met	Cys	Gly	Leu	Met	Leu	Lys	Leu	Lys	Trp	Cys	Ala	Trp
	50	<del>)</del>	1.9	-		55					60				_
Val	. Ala	Val	Tyr	Cys	Ser	Phe	lle	Ser	Phe	Ala	Asn	Ser	Arg	Ser	Ser
65			-	•	:.70			-		75					80
Glu	Asp	Thr	Lys	Gln	Met	Met	Ser	Ser	Phe	Met	Leu	Ser	Ile	Ser	Ala
				85		٠ .			90					95	
Val					Leu	Gln	Asn	Pro	Gln	Pro	Met	Thr	Pro	Pro	Trp
	,		100					105			•		110		
	,		,												
					•	:					-				
	0> 1														
	1>.1														
	2> P											•		-	
<21	3> H	omo	sapi	ens											
- 40	^ 1	414 -													
			<b>~1</b>		•		_		_		_				
Cys 1		GLY	GIY		Pro	Arg	Суз	vai		Arg	Leu	Thr	Ala		Leu
1				5					10					15	
C1	C1	7	N				<b></b>			_	_		_		
GIU	GLY	ALG	20	Asp	ser	Ата	Thr		Ala	Pro	Pro	Hıs		Arg	Leu
			20					25					30		
2	17-1	T	n		*** 1	<b>~</b> 1	<b></b> .			_	_		_		-
ALG	vaı	35	ALG	MIG	Val	GIY	Pro	GIU	ser	Pro	Pro		Trp	GIn	Trp
		,,,					40					45			
Dro	Pro	T 013	m		T1-	T	<b>D</b>		~ .	•				_	_
FIO	50	reu	TÄI	ser.	116		Pro	ser	GTÅ	Arg		Ala	val	Asn	ràs
	50					55					60				
Ara	Tro	A 1 =	Dro	G1 ~	ce-	mb~	C	n	D	m k	n 1 -	<b>.</b>	<b>.</b> 1 -		
65		.,Td	T. T.O.	GTII	70	THE	Cys	PLO	PTO		AIG	Leu	ALA	vai	
					, 0					75					80
G] v	Ser	Ser	Len	Gln	Pho	ሞh ∽	Gly	Δes	T 11.5	Dra	G1	co-	A 7 ~	n	Mb er
3				85			JLY	.,211	90 90		GIU	-CI	mid .	95	T111_
									20					,,	

1485

Arg Gly Cys Ser Pro Gly Ser Ala Arg Pro Pro Leu Ser Pro Ala Thr

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100
                                 105
 Gly Trp Arg Cys Arg Ala Arg Ala Ala Ala Ser Arg Arg Phe Pro Gly
                120
 Ala Pro Gly Pro Glu Glu Arg Ser Pro Gln Ser Lys Gly Gly Asn Thr
                        135
                                            140
 Cys Leu Arg Cys Lys Glu Ile Leu Phe Gln Ser Ile Pro Val Val Gln
                    150
                                       155
Thr Asp Thr Val Pro Asn Glu Arg Ser Asp Val Phe Ser Ser Pro Phe
                165
                                   170
Leu Ile Cys Phe Leu Thr Gly Leu Arg Phe
                               185
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<211> 108
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<220>
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            20
Lys Pro Met Tyr Lys Pro Val Asp Pro Tyr Ser Arg Met Xaa Ser Thr
Tyr Asn Tyr Asn Met Arg Gly Gly Ala Tyr Pro Pro Arg Tyr Phe Tyr
    50
                        55
                                           60
Pro Phe Pro Xaa Pro Pro Leu Leu Tyr Gln Val Glu Leu Ser Val Gly
65
                   70
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Cys Cys Pro Met Pro Gln Ala Ser Cys Cys Glu Asp Arg Val His Cys

		1	70				200	)				20	5		e Thr
Pr	0 Th 21	r G: 0	ly Ti	r Hi	s Pr	215	ı Ala	Ly:	s Ly	s Le	220		a Gl	n Ar	g Thr
22:	5				230	)				235	5				a Arg 240
				24	5				250	)				255	
			26	0				265	•				270	)	5 Leu
		27	5				280					285			Cys
	290	,				295					300				Ala
305					310					315					320
				325					330					335	
			340	)	Суѕ			345					350		
		355	•		Thr		360					365			
	3/0				Glu	375					380				
385					Arg 390					395					400
				405	Cys				410					415	
			420		Ala		•	425					430		
		435			Cys		440				•	445			
Glu	11e 450	Val	Ala	Gly	Leu	Glu 1 455	Lys A	let i	Pro .		Arg <i>1</i> 460	Arg A	Ala	Ser	Leu

465		Pro	Arg	Asp	470	Gly	Суѕ	Asp	Gln	His 475		Ser	Cys	Pro	Val 480
Gly	Gln	·Thr	Сув	Cys 485		Ser	Leu	Gly	Gly 490	Ser	Trp	Ala	Cys	Cys 495	Gln
Leu	Pro	His	Ala 500	Val	Cys	Cys	Glu	Asp 505		Gln	His	Cys	Cys 510	Pro	Ala
Gly	Туr	Thr 515	Cys	Asn	Val-	Lys	Ala 520		Ser	Cys	Glu	Lys 525		Val	Val
Ser	Ala 530	Gln	Pro	Ala	Thr	Phe 535	Leu	Ala	Arg	Ser	Pro 540	His	Val	Gly	Val
Lys 545	Asp	'Val	Glu	Cys	Gly 550		Gly	His	Phe	Cys 555		Asp	Asn	Gln	Thr 560
Cys	Cys	Arg	Asp	Asn 565	Arg	Gln	Gly	Trp	Ala 570	Суѕ	Cys	Pro	Tyr	Arg 575	Gln
Gly	Val	Cys	Cys 580	Ala	Asp	Arg	Arg	His 585	Cys	Cys	Pro	Ala	Gly 590	Phe	Arg
Cys	Ala	Ala 595	Arg	Gly	Thr	Lys	600	Leu	Arg	Arg	Glu	Ala 605	Pro	Arg	Trp
Asp	Ala 610	Pro	Leu	Arg	Asp	Pro 615	Ala	Leu	Arg	Gln	Leu 620	Leu			
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	> (1														
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Ser 1	Ala	His	Ala	Ser 5	Glu .	Arg	Ile	Ala	Xaa 10	Ser	Gly	Суз	Gly	Ala 15	Pro

1489

Ala	Ala	Gly	Ala 20	Gly	Pro	Arç	y Xaa	Arg 25		: Leu	Gly	Ala	Asp 30		Gly
Arg	Ala	Ala 35	Arg	Arg	His	Glu	Gly 40		Gly	Gly	Glu	Gly 45	Gly	Arg	g Arg
Thr	Ala 50	Gly	Arg	Trp	Arg	Arg 55	Lys	Pro	Glu	Lys	Ser 60		Ser	Ala	Gln
Glu 65	Leu	Lys	Glu	Gln	Gly 70	Asn	Arg	Leu	Phe	75		Arg	Lys	Туг	Pro 80
Glu	Ala	Ala	Ala	Cys 85	Tyr	Gly	Arg	Ala	Ile 90		Arg	Asn	Pro	Leu 95	Val
Ala	Val	Tyr	Tyr 100	Thr	Asn	Arg	Ala	Leu 105	Cys	Tyr	Leu	Lys	Met 110	Gln	Gln
His	Glu	Gln 115	Ala	Leu	Ala	Asp	Cys 120	Arg	Arg	Ala	Leu	Glu 125	Leu	Asp	Gly
Gln	Ser 130	Val	Lys	Ala	His	Phe 135	Phe	Leu	Gly	Gln	Cys 140	Gln	Leu	Glu	Met
Glu 145	Ser	Tyr	Asp	Glu	Ala 150	Ile	Ala	Asn	Leu	Gln 155	Arg	Ala	Tyr	Ser	Leu 160
Ala	Lys	Glu	Gln	Arg 165	Leu	Asn	Phe	Gly	Asp 170	Asp	Ile	Pro	Ser	Ala 175	Leu
Arg	Ile	Ala	Lys 180	Lys	Lys	Arg	Trp	Asn 185	Ser	Ile	Glu	Glu	Arg 190	Arg	Ile
His	Gln	Glu 195	Ser	Glu	Leu	His	Ser 200	Tyr	Leu	Ser	Arg	Leu 205	Ile	Ala	Ala
Glu	Arg 210	Glu	Arg	Glu	Leu	Glu 215	Glu	Cys	Gln	Arg	Asn 220	His	Glu	Gly	Asp
Glu 225	Asp	Asp	Ser	His	Val 230	Arg	Ala	Gln	Gln	Ala 235	Cys	Ile	Glu	Ala	Lys 240
His .	Asp	Lys	Tyr	Met 245	Ala	Asp	Met	Asp	Glu 250	Leu	Phe	Ser	Gln	Val 255	Asp
Glu :	Lys	Arg	Lys 260	Lys	Arg	Asp	Ile	Pro 265	Asp	туг	Leu		Gly 270	Lys	Ile
Ser 1	Phe	Glu 275	Leu	Met	Arg	Glu	Pro 280	Cys	Ile	Thr		Ser 285	Gly	Ile	Thr

0055350A1 | >

Tyr Asp Arg Lys Asp Ile Glu Glu His Leu Gln Arg Val Gly His Phe 290 295 300

Asp Pro Val Thr Arg Ser Pro Leu Thr Gln Glu Gln Leu Ile Pro Asn 305 310 315 320

Leu Ala Met Lys Glu Val Ile Asp Ala Phe Ile Ser Glu Asn Gly Trp 325 330 335

Val Glu Asp Tyr 340

<210> 1418

<211> 235

<212> PRT

<213> Homo sapiens

<400> 1418

Ser Pro Arg Pro Leu Arg Phe Cys Gly Gly Ala Arg Ala Arg Pro 1 5 10 15

Leu Ser Ala Val Ala Arg Pro Ala Arg Ser Ser Asp Pro Leu Arg Ser 20 25 30

Ala Pro Leu Gly Pro Ala Pro Pro Val Asn Met Ile Arg Cys Gly Leu 35 40 45

Ala Cys Glu Arg Cys Arg Trp Ile Leu Pro Leu Leu Leu Leu Ser Ala 50 55 60

Ile Ala Phe Asp Ile Ile Ala Leu Ala Gly Arg Gly Trp Leu Gln Ser 65 70 75 80

Ser Asp His Gly Gln Thr Ser Ser Leu Trp Trp Lys Cys Ser Gln Glu 85 90 95

Gly Gly Gly Ser Gly Ser Tyr Glu Glu Gly Cys Gln Ser Leu Met Glu 100 105 110

Tyr Ala Trp Gly Arg Ala Ala Ala Ala Met Leu Phe Cys Gly Phe Ile 115 120 125

Ile Leu Val Ile Cys Phe Ile Leu Ser Phe Phe Ala Leu Cys Gly Pro 130 135 140

Ala Val Phe Gln Ile Ile Ser Leu Val Ile Tyr Pro Val Lys Tyr Thr

1491

165 170 175 . Gln Thr Phe Thr Leu His Ala Asn Arg Ala Val Thr Tyr Ile Tyr Asn 180 185 Trp Ala Tyr Gly Phe Gly Trp Ala Ala Thr Ile Ile Leu Ile Gly Cys 200 Ala Phe Phe Cys Cys Leu Pro Asn Tyr Glu Asp Asp Leu Leu Gly 215 Asn Ala Lys Pro Arg Tyr Phe Tyr Thr Ser Ala 230 <210> 1419 <211> 86 <212> PRT <213> Homo sapiens <400> 1419 Arg Arg Gln Ala Leu Gln Glu Arg Cys Pro Phe Asn Pro Leu Ser Ala Leu Asp Arg Cys Cys Val Lys Leu Leu Met Asp Ile Tyr Met Arg 25 Ser Ser Phe Leu Tyr Ala Ile Pro Ala Val Phe Phe Leu Thr Gly Pro Cys Leu Arg Ile Asn Lys Ser Val Met Ser Glu Thr Lys Val Tyr 55 Ser Ser Val Cys Arg Cys Val Ala Pro Pro Phe Ser Pro Ala Ala Pro 70 His Ile Gln Ser Arg Ser <210> 1420 <211> 351 <212> PRT <213> Homo sapiens <400> 1420 Thr Trp Cys Thr Thr Thr Met Leu Ala Ala Arg Leu Val Cys Leu Arg 5 10

Thr	Leu	Pro	Ser 20		Val	Phe	His	Pro 25		Phe	Thr	Lys	Ala 30		Pro
Val	Val	Lys 35		Ser	Ile	Thr	Lys 40		Glm	Trp	Leu	Leu 45	Thr	Pro	Se:
Arg	G1u 50		Ala	Thr	Lys	Thr 55		Ile	Gly	Ile	Arg 60		Gly	Arg	Thi
Gly 65	Gln	Glu	Leu	Lys	Glu 70		Ala	Leu	Glu	Pro		Met	Glu	Lys	11e
Phe	Lys	Ile	Asp	G1n 85	Met	Gly	Arg	Trp	Phe 90		Ala	Gly	Gly	Ala 95	
Val	Gly	Leu	Gly 100	Ala	Leu	Cys	туr	туr 105		Leu	Gly		Ser		Glu
Ile	Gly	Ala 115	Ile	Glu	_	Ala		Ile	Trp	Pro	Gln	Tyr 125	Val	Lys	Asp
Arg	11e 130	His	Ser	Thr	Tyr	Met 135		Leu	Ala		Ser 140		Gly	Leu	Thr
Ala 145	Leu	Ser	Ala	Ile		Ile	ser	Arg	Thr	Pro 155	Val	Leu	Met	Asn	Phe 160
Met	Met	Arg	Gly	Ser 165		Val	Thr	Ile	Gly 170	Val	Thr	Phe	Ala	Ala 175	Met
Val	Gly	Ala	Gly 180	Met	Leu	Val	Arg	Ser 185	Ile	Pro	Tyr	Asp	Gln 190	Ser	Pro
Gly	Pro	Lys 195	His	Leu	Ala	Trp	Leu 200	Leu	His	Ser	Gly	Val 205	Met	Gly	Ala
Val	Val 210	Ala	Pro	Leu	Thr	11e 215	Leu	Gly	Gly	Pro	Leu 220	Leu	Ile	Arg	Ala
225					230		_			235			Val		240
Cys	Ala	Pro	Ser	Glu 245	Lys	Phe	Leu	Asn	Met 250	Gly	Ala	Pro	Leu	Gly 255	Val
Gly	Leu	Gly	Leu 260	Val	Phe	Val	Ser	Ser 265	Leu	Gly	Ser	Met	Phe 270	Leu	Pro
Pro		Thr 275		Ala			Thr 280					Ala 285	Met	Tyr	Gly

Gly Leu Val Leu Phe Ser Met Phe Leu Leu Tyr Asp Thr Gln Lys Val 295 Ile Lys Arg Ala Glu Val Ser Pro Met Tyr Gly Val Gln Lys Tyr Asp 315 Pro Ile Asn Ser Met Leu Ser Ile Tyr Met Asp Thr Leu Asn Ile Phe 325 330 Met Arg Val Ala Thr Met Leu Ala Thr Gly Gly Asn Arg Lys Lys 340 345 <210> 1421 <211> 81 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (3) <223> Xaa equals any of the naturally occurring L-amino acids <400> 1421 Cys Gly Xaa Leu Leu Met Ala Gln Gly Leu Ser Ala Ser Ala Leu Glu 1 5 Gly Leu Lys Thr Glu Glu Gly Ser Val Arg Gly Ala Leu Pro Ala Val Ser Ser Pro Pro Ala Pro Val Ser Pro Ser Ser Pro Thr Thr His Asn 40 Gly Glu Leu Glu Pro Ser Phe Ser Pro Leu Leu Gly Glu Gly Lys Thr 50 Pro Glu Thr Leu Leu Pro Gln Lys Cys Trp Gly Gln Gly Gly Pro Gly Arg <210> 1422 <211> 484 <212> PRT <213> Homo sapiens

<400> 1422

Ala l		Arg	Ser	Thr 5		Val	Asp	Pro	Lys 10		Ser	Ala	Gln	Glu 15	Arg
Arg	Ala	Leu	Gly 20	Pro	Leu	Pro	Pro	Cys 25	Ser	Phe	Ala	Leu	Gln 30		Gly
Met	Ala	Gly 35		Leu	Arg	Val	Val 40	Arg	Ser	Leu	Cys	Arg 45		Ser	Gly
Ser	Arg 50		Ala	Trp	Ala	Pro 55	Ala	Ala	Leu	Thr	Ala 60	Pro	Thr	Ser	Gln
Glu 65	Gln	Pro	Arg	Arg	His 70	Tyr	Ala	Asp	Lys	Arg 75	Ile	Lys	Val	Ala	Lys 80
Pro	Val	Val	Glu	Met 85	Asp	Gly	Àsp	Glu	Met 90	Thr	Arg	Ile	Ile	Trp 95	Gln
Phe	Ile	Lys	Glu 100	Lys	Leu	Ile	Leu	Pro 105	His	Val	Asp	Ile	Gln 110	Leu	Lys
Tyr	Phe	Asp 115	Leu	Gly	Leu	Pro	Asn 120	Arg	Asp	Gln	Thr	Asp 125	Asp	Gln	Val
Thr	Ile 130	Asp	Ser	Ala	Leu	Ala 135	Thr	Gln	Lys	Tyr	Ser 140	Val	Ala	Val	Lys
Cys 145	Ala	Thr	Ile	Thr	Pro 150	Asp	Glu	Ala	Arg	Val 155	Glu	Glu	Phe	Lys	Leu 160
Lys	Lys	Met	Trp	Lys 165	Ser	Pro	Asn	Gly	Thr 170	Ile	Arg	Asn	Ile	Leu 175	Gly
Gly	Thr	Val	Phe 180	Arg	Glu	Pro	Ile	Ile 185	Суз	Lys	Asn	Ile	Pro 190	Arg	Leu
Val	Pro	Gly 195	Trp	Thr	Lys	Pro	Ile 200	Thr	Ile	Gly	Arg	His 205	Ala	His	Gly
Asp	Gln 210	Tyr	Lys	Ala		Asp 215	Phe	Val	Ala		Arg 220	Ala	Gly	Thr	Phe
Lys 225	Met	Val	Phe	Thr	Pro 230	Lys	Asp	Gly		Gly 235	Val	Lys	Glu	Trp	Glu 240
Val	Tyr	Asn		Pro 245	Ala	Gly	Gly		Gly 250	Met	Gly	Met		Asn 255	Thr
Asp	Glu	Ser	Ile 260		Gly			His 265		Cys	Phe		Tyr 270	Ala	Ile

1495

Gln Lys Lys Trp Pro Leu Tyr Met Ser Thr Lys Asn Thr Ile Leu Lys 275 280 Ala Tyr Asp Gly Arg Phe Lys Asp Ile Phe Gln Glu Ile Phe Asp Lys 295 His Tyr Lys Thr Asp Phe Asp Lys Asn Lys Ile Trp Tyr Glu His Arg 315 Leu Ile Asp Asp Met Val Ala Gln Val Leu Lys Ser Ser Gly Gly Phe 325 330 Val Trp Ala Cys Lys Asn Tyr Asp Gly Asp Val Gln Ser Asp Ile Leu 345 Ala Gln Gly Phe Gly Ser Leu Gly Leu Met Thr Ser. Val Leu Val Cys 360 Pro Asp Gly Lys Thr Ile Glu Ala Glu Ala Ala His Gly Thr Val Thr Arg His Tyr Arg Glu His Gln Lys Gly Arg Pro Thr Ser Thr Asn Pro 390 395 Ile Ala Ser Ile Phe Ala Trp Thr Arg Gly Leu Glu His Arg Gly Lys 405 410 Leu Asp Gly Asn Gln Asp Leu Ile Arg Phe Ala Gln Met Leu Glu Lys 425 Val Cys Val Glu Thr Val Glu Ser Gly Ala Met Thr Lys Asp Leu Ala Gly Cys Ile His Gly Leu Ser Asn Val Lys Leu Asn Glu His Phe Leu 455 Asn Thr Thr Asp Phe Leu Asp Thr Ile Lys Ser Asn Leu Asp Arg Ala 465 470 475

Leu Gly Arg Gln

<210> 1423 <211> 240 <212> PRT <213> Homo sapiens

<221> SITE

~ 2 2		( + )	,												
<22	3> }	kaa e	equa)	ls an	y of	the	e nat	tural	Lly o	occu	ring	g L-a	amino	aci	ids
< 40	0> 1	1423													
Val 1		, Ile	Pro	Gly 5	Ser	Thr	His	s Ala	Ser 10		, Gl	/ Gly	/ Asp	Gl <sub>3</sub>	
Met	Glu	ser	Gly 20		Tyr	Gly	Ala	Ala 25		s Ala	Gly	gly	ser 30		: Asp
Leu	Arg	Arg 35		Leu	Thr	Gln	Pro 40		Val	. Val	. Ala	Arg 45		. Val	. Cys
Leu	Val 50		Ala	Leu	Ile	Val		ser	Cys	: Ile	Tyr 60		Glu	Gly	Туг
Ser 65	Asn	Ala	His	Glu	Ser 70	Lys	Gln	Met	Tyr	Cys 75		Phe	Asn	Arg	Asn 80
Glu	Asp	Ala	Cys	Arg 85	Tyr	Gly	Ser	Ala	90		Val	Leu	Ala	Phe 95	
Ala	Ser	Ala	Phe 100	Phe	Leu	Val	Val	Asp 105		Tyr	Phe	Pro	Gln 110	Ile	Ser
Asn	Ala	Thr 115	Asp	Arg	Lys	Туг	Leu 120		Ile	Gly	Asp	Leu 125	Leu	Phe	Ser
Ala	Leu 130		Thr	Phe	Leu	Trp 135	Phe	Val	Gly	Phe	Cys.	Phe	Leu	Thr	Asn
Gln 145	Trp	Ala	Val	Thr	Asn 150	Pro	Lys	Xaa	Val	Leu 155	Val	Gly	Ala	Asp	Ser 160
Val	Arg	Ala	Ala	Ile 165	Thr	Phe	Ser	Phe	Phe 170	Ser	Ile	Phe	Ser	Trp 175	Gly
Val	Leu	Ala	Ser 180	Leu	Ala	Tyr	Gln	Arg 185	Tyr	Lys	Ala	Gly	Val 190	Asp	Asp
Phe	Ile	Gln 195	Asn	Tyr	Val	Asp	Pro 200	Thr	Pro	Asp	Pro	Asn 205	Thr	Ala	туг
Ala	Ser 210	Tyr	Pro	Gly	Ala	Ser <sup>-</sup> 215	Val	Asp	Asn	туг	Gln 220	Gln	Pro	Pro	Phe
Thr 225	Gln	Asn	Ala	Glu	Thr 230	Thr	Glu	Gly	Tyr	Gln 235	Pro	Pro	Pro	Val	Tyr 240

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Arg Val Arg Arg Gln Ser Ser Gly Asn Leu Thr Met Ala Trp Thr Pro
Leu Leu Pro Leu Leu Thr Phe Cys Thr Val Ser Glu Ala Ser Tyr
                                25
Glu Leu Thr Gln Pro Pro Ser Val Ser Val Ser Pro Gly Gln Thr Ala
                             40
Arg Ile Thr Cys Ser Gly Asp Ala Leu Pro Xaa Lys Tyr Xaa Tyr Trp
Tyr Gln Gln Lys Ser Gly Gln Ala Pro Val Leu Val Ile Tyr Glu Asp
                    70
Thr Arg Arg Pro Ser Ala Ile Pro Glu Arg Phe Ser Ala Ser Ser Ser
Gly Thr Met Ala Thr Leu Thr Ile Ser Gly Ala Gln Val Glu Asp Glu
            100
                                105
Ala Asp Tyr Tyr Cys Tyr Ser Thr Asp Ser Ser Ser Tyr Tyr Arg Val
Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gln Pro Lys Ala Ala
                       135
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Pro Ser Val Thr Leu Phe Pro Pro Ser Ser Glu Glu Leu Gln Ala Asn
   145
                                                            150
                                                                                                                          155
  Lys Ala Thr Leu Val Cys Leu Ile Ser Asp Phe Tyr Pro Gly Ala Val
                                                   165
                                                                                                             170
  Thr Val Ala Trp Lys Ala Asp Ser Ser Pro Val Lys Ala Gly Val Glu
                                                                                                  185
  Thr Thr Thr Pro Ser Lys Gln Ser Asn Asn Lys Tyr Ala Ala Ser Ser
                                                                                      200
  Tyr Leu Ser Leu Thr Pro Glu Gln Trp Lys Ser His Xaa Ser Tyr Ser
                                                                          215
  Cys Gln Val Thr His Glu Gly Ser Thr Val Glu Lys Thr Val Ala Pro
  225
                                                                                                                          235
 Thr Glu Cys Ser
                ing the state of 
 <210> 1425
 <211> 173
 <212> PRT
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                                                                                     <220>
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1499

<223> Xaa equals any of the naturally occurring L-amino acids <400> 1425 Xaa Val Arg Val Gln Thr Arg Gly Ser Ala Asp Pro Ala Gln Leu Arg Arg His Pro Gly Tyr Lys Arg Thr Ala Ser Ala Thr Leu Ser Asp Pro 20 25 Ala Ala Ala Met Gln Pro Ser Ser Leu Leu Pro Leu Ala Leu Cys Leu Leu Ala Ala Pro Ala Ser Ala Leu Val Arg Ile Pro Leu His Lys Phe Thr Ser Ile Arg Arg Thr Met Ser Glu Val Gly Gly Ser Val Glu 70 Asp Leu Ile Ala Lys Gly Pro Val Ser Lys Tyr Ser Gln Ala Val Pro Ala Val Thr Glu Gly Pro Ile Pro Glu Val Leu Lys Asn Tyr Met Asp 100 110 Ala Gln Kaa Tyr Gly Glu Ile Gly Ile Gly Thr Pro Pro Gln Cys Phe 125 Thr Val Val Phe Asp Thr Gly Xaa Xaa Asn Leu Trp Val Pro Ser Ile 135 His Cys Lys Leu Leu Asp Ile Ala Cys Trp Ile His His Lys Xaa Asn 150 Ser Asp Lys Ser Ser Asn Tyr Val Lys Asn Gly Asn Ser 165 <210> 1426 <211> 351 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (35) <223> Xaa equals any of the naturally occurring L-amino acids <400> 1426 Ile Arg His Glu Ile Leu Trp Leu Leu Cys Ser His Arg Pro Ala Pro

GIY	Arg	Pro	20		His	Asn	Ala	His 25		Trp	Arg	j Leu	Gly 30		n Ala
Pro	Ala	Xaa 35		Tyr	Asn	Asp	Thr 40		Pro	Leu	Ser	Pro 45		Glr	Arg
Thr	Pro 50		Gly	Ile	Arg	Tyr 55		Ile	Ala	Val	Ile 60		Asp	Leu	Asp
Thr 65	Glu	Ser	Arg	Ala	Gln 70	Glu	Glu	Asn	Thr	Trp 75		Ser	Tyr	Leu	Lys 80
Lys	Gly	Tyr	Leu	Thr 85	Leu	Ser	Asp	Ser	Gly 90		Lys	Val	Ala	Val 95	
Trp	Asp	Lys	Asp 100	His	Gly	Val	Leu	Glu 105	Ser	His	Leu	Ala	Glu 110		Gly
Arg	Gly	Met 115	Glu	Leu	Ser	Asp	Leu 120	Ile	Val	Phe	Asn	Gly 125		Leu	Туг
Ser	Val 130	Asp	Asp	Arg	Thr	Gly 135	Val	Val	Tyr	Gln	Ile 140		Gly	Ser	Lys
Ala 145	Val	Pro	Trp	Val	11e 150	Leu	Ser	Asp	Gly	Asp 155	Gly	Thr	Val	Glu	Lys 160
Gly	Phe	Lys	Ala	Glu 165	Trp	Leu	Ala	Val	Lys 170	Asp	Glu	Arg	Leu	Tyr 175	Val
Gly	Gly	Leu		Lys	Glu		Thr	Thr 185	Thr	Thr	Gly		Val 190	Val	Asn
Glu	Asn	Pro 195		Trp	Val	Lys	Val 200	Val	Gly	Tyr	Lys	Gly 205		Val	Asp
His	Glu 210	Asn	Trp	Val	Ser	Asn 215.	туг	Asn	Ala	Leu	Arg 220	Ala	Ala	Ala	Gly
11e 225	Gln	Pro -	Pro		Туг 230	Leu	Ile	His	Glu	Ser 235,		Cys	Trp	Ser	Asp 240
rhr	Leu	Gln		Trp 245	Phe	Phe	Leu	Pro	Arg 250,		Ala	Ser	Gln	Glu 255	Arg
Tyr	Ser	Glu	Lys 260	Asp	Asp	Glu		Lys 265	Gly	Ala	Asn	Leu	Leu 270	Leu	Ser
Ala	Ser	Pro 275	Asp	Phe	Gly	Asp	Ile 280	Ala	Val	Ser	His	Val 285	Gly	Ala	Val

Val Pro Thr His Gly Phe Ser Ser Phe Lys Phe Ile Pro Asn Thr Asp 290 295 300

Asp Gln Ile Ile Val Ala Leu Lys Ser Glu Glu Asp Ser Gly Arg Val 305 310 315 320

Ala Ser Tyr Ile Met Ala Phe Thr Leu Asp Gly Arg Phe Leu Leu Pro 325 330 335

Glu Thr Lys Ile Gly Ser Val Lys Tyr Glu Gly Ile Glu Phe Ile 340 345 350

<210> 1427

<211> 510

<212> PRT

<213> Homo sapiens

<400> 1427

Glu Arg Ser Trp Phe Ala Gln Val Arg Arg Leu Gly Pro His Gly Ala 1 5 10 15

Val Ala Arg Leu Arg Val Arg Gly Leu Pro Gly Ala Gly Arg Gly Leu 20 25 30

Arg Leu Pro Ala Gly Ala Arg Ala Ala Arg Leu Gly Ala Ala Leu Ser 35 40 45

Leu Glu Leu Ala Val Ser Gly Ala Arg Ala Cys Ala Pro Gly Thr Arg
50 55 60

Leu Pro Arg Gly Pro Val Gly Gly Ser Trp Asp Ala Leu Ile Val Arg 65 70 75 80

Pro Val Arg Arg Trp Arg Arg Val Ala Val Gly Val Asn Ala Cys Val 85 90 95

Asp Val Val Leu Ser Gly Val Lys Leu Leu Gln Ala Leu Gly Leu Ser 100 105 110

Pro Gly Asn Gly Lys Asp His Ser Ile Leu His Ser Arg Asn Asp Leu 115 120 125

Glu Glu Ala Phe Ile His Phe Met Gly Lys Gly Ala Ala Ala Glu Arg 130 \$135\$ 140

Phe Phe Ser Asp Lys Glu Thr Phe His Asp Ile Ala Gln Val Ala Ser 145 150 155 160

011	2 2110	= FL	J G13	165		n H1:	з Ту	r Va.	1 G1;		y Ası	n Ala	a Ala	179	
Gly	/ Gl:	n Lys	180	e-Ala )	a Ala	a Ası	n Sei	r Ası		ı Ly:	s Vai	l Le	1 Lei 190		s Gly
Pro	Va]	195	Pro	Lys	Leu	ı His	200		ı Let	ı Ası	) Asp	205		L Phe	≥ Val
Pro	210	Glu ) :	Ser	Leu	Glm	215		. Asp	Glu	ı Phe	220		ı Ile	e Leu	Glu
Tyr 225	Gln	a Ala	Gly	Glu	Glu 230		Gly	Gln	Leu	235		Pro	His	Ala	Asn 240
Arg	Phe	: Ile	Phe	Ser 245		Asp	Leu	Ser	250			Met	Asn	Met 255	
Glu	Val	Phe	Val 260		Ser	Leu	Glu	Glu 265		Gln	Pro	Asp	Leu 270		Val
Leu	Ser	Gly 275		His	Met	Met	Glu 280		Gln		Lys	Glu 285		Gln	Arg
Lys	Arg 290	Leu	Leu	Glu	Val	Val 295		Ser	Ile	Ser	Asp 300		Pro	Thr	Gly
11e 305	Pro	Val	His	Leu	Glu 310	Leu	Ala	Ser	Met	Thr 315	Asn	Arg	Glu	Leu	Met 320
Ser	Ser	Ile	Val	His 325	Gln	Gln	Val	Phe	Pro 330		Val	Thr	Ser	Leu 335	Gly
Leu	Asn	Glu	Gln 340	Glu	Leu	Leu	Phe	Leu 345	Thr	Gln	Ser	Ala	Ser 350	Gly	Pro
His	Ser	Ser 355	Leu	Ser	Ser	Trp	Asn 360	Gly	Val	Pro	Asp	Val 365	Gly	Met	Val
Ser	Asp 370	Ile	Leu	Phe	Trp	Ile 375	Leu	Lys	Glu	His	Gly 380	Arg	Ser	Lys	Ser
Arg 385	Ala	Ser	Asp	Leu	Thr 390	Arg	Ile	His	Phe	His 395	Thr	Leu		Tyr	His 400
		Ala		405					410					415	Val
Ala	Ala	Gly			Val										Thr

- Ile Asp Thr Ser Arg Val Ser Leu Arg Ala Pro Gln Glu Phe Met Thr 435 440 445
- Ser His Ser Glu Ala Gly Ser Arg Ile Val Leu Asn Pro Asn Lys Pro 450 455 460
- Val Val Glu Trp His Arg Glu Gly Ile Ser Phe His Phe Thr Pro Val 465 470 475 480
- Leu Val Cys Lys Asp Pro Ile Arg Thr Val Gly Leu Gly Asp Ala Ile 485 490 495
- Ser Ala Glu Gly Leu Phe Tyr Ser Glu Val His Pro His Tyr 500 505 510
- <210> 1428
- <211> 316
- <212> PRT
- <213> Homo sapiens
- <400> 1428
- Pro Pro Leu Pro Pro Arg Ser Phe Pro Asn Leu Phe Ser Arg Pro Glu  $1 \hspace{1cm} 5 \hspace{1cm} 10 \hspace{1cm} 15$
- Pro Leu Pro Glu Pro Gly Arg Arg Gly Cys Asn Arg Ser Arg Glu Pro 20 25 30
- Ala Ala Arg Ala Pro Ser Pro Pro Pro Pro Phe Glu Gly Ala Pro Gly 35 40 45
- Arg Ala Met Val Lys Val Thr Phe Asn Ser Ala Leu Ala Gln Lys Glu 50 55 60
- Ala Lys Lys Asp Glu Pro Lys Ser Gly Glu Glu Ala Leu Ile Ile Pro
  65 70 75 80
- Pro Asp Ala Val Ala Val Asp Cys Lys Asp Pro Asp Asp Val Val Pro 85 90 95
- Val Gly Gln Arg Arg Ala Trp Cys Trp Cys Met Cys Phe Gly Leu Ala 100 105 110
- Phe Met Leu Ala Gly Val Ile Leu Gly Gly Ala Tyr Leu Tyr Lys Tyr 115 120 125
- Phe Ala Leu Gln Pro Asp Asp Val Tyr Tyr Cys Gly Ile Lys Tyr Ile 130 135 140
- Lys Asp Asp Val Ile Leu Asn Glu Pro Ser Ala Asp Ala Pro Ala Ala

145					150					155	5				160
Leu	Tyr	Gln	Thi	r Ile 165		Glu					Phe	Glu	Glu	1 Glu	Glu
Val	Glu	Phe	Ile 180	e Ser	Val	Pro		Pro		Phe		Asp			Pro
Ala	Asn	11e 195	Va]	His	Asp	Phe	Asn 200	Lys	Lys	Leu	Thr	Ala 205		Leu	Asp
Leu	Asn 210	Leu	Asp	Lys	Cys	Tyr 215	Val	Ile	Pro	Leu		Thr	Ser	Ile	Val
Met 225	Pro	Pro	Arg	Asn	Leu 230	Leu	Glu				Asn		Lys	Ala	Gly 240
Thr	Tyr	Leu	Pro	Gln 245		туг		Ile				Met	Val	Ile 255	Thr
Asp	Arg	Ile	Glu 260	Asn	Ile	Asp		Leu 265		Phe	Phe	Ile	туг 270		Leu
Cys	His	Asp 275	Lys	Glu	Thr		Lys 280	Leu	Gln	Arg	Arg	Glu 285	Thr	Ile	Lys
Sly	11e 290	Gln	Lys	Arg		Ala 295	Ser	Asn	Cys	Phe	Ala 300	Ile	Arg	His	Phe
31u 305	Asn	Lys	Phe	Ala	Val 310	Glu	Thr	Leu	Ile	Cys 315	Ser				
211 212	> PF	8		ene		- ,					:			٠	
		-													
	> 14 Thr		Val	Asp 5	Phe	Asn	Val	Pro 	Met 10	Lys	Asn	Asn		Ile 15	Thr
sn.	Asn	Gln		Ile			Ala		Pro	Ser	Ile	Lys	Phe 30	Cys 	Leu
	Asn			Lys		Val			Met	Ser	His	Leu 45	Gly	Arg	Pro
sp (				Met				Tyr			Glu 60	Pro	Val	Ala	Val

G1 6	u Le 5	u L	ys S	er L	eu Le	eu G] 70	ly Ly	's As	p Va	l Le 7	u Pho 5	e Le	u Ly:	s Ası	o Cys 80
۷a	l Gl	y P	ro G	lu V	al G] 85	lu Ly	s Al	a Cy	s Al	a Ası	n Pro	Ala	a Ala	Gl <sub>3</sub>	y Ser
Va	1 11	e Le	eu L l∙	eu G: 00	lu As	n Le	u Ar	g Pho 10		s Val	l Glu	ı Glu	110		, Lys
		11	. 5				12	0				125	•		Ile
	1.5	U				13	5				140				Asn
143	•				15	0	s Arq			155					160
				16	5		y G13	_	170					175	
			18	0			ı Ser	185					190		
		19	5				Asp 200					205			
	210					215					220				
225					230	)	Met			235					240
				245	5		Lys		250					255	
			260	)			Pro	265					270		
		275					Gly 280					285			
	290					295					300				
305					310		Ala			315					320
val	дТÅ	val	Phe	Glu 325	Trp	Glu	Ala		Ala . 330		Gly 1	Thr 1	Lys A	la 1	Leu

Met	L As	p Gl	u Va 34	1 Va 0	l Ly	s Al	a Th	34:		g Gl	у Су	s Il	e Th 35		e Il
Gl	/ Gl	y G1 35	y As	p Th	r Ala	a Thi	r Cys	S Cys	s Ala	a Lys		9 Ası			u Ası
Lys	Va:	L Se:	r His	s Vai	l Se	r Thi	r Gly	, Gly	/ Gly	/ Ala	ı Se:	r Lei	ı Glı	ı Le	u Lei
	. 370	) .		-		37.5	5	-			3.8	<u>a</u>		: 1	
Glu 385	Gl	Ly	s Val	l Leu	1 Pro	Gly	/ Val	Asp		1 Leu	ı Sei	Ası	ıle		
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	0> 1 1> 2											•			
	2> F 3> H		sapi	ens			• :				-		2		
			Jupi												*
<22 <22	0> 1> s	ITE						-		-	-			1 11	
<22	2> (	245)													
<22	3> x	aa e	qual	s an	y of	the	nat	ural	ly o	ccur	ring	L-a	mino	aci	.ds
	0> 1								-						
Pro 1	Ala	Met	Gly	Ala 5		Val	Phe	Phe	Gly 10		Thr	Phe	Val	Ala 15	
Gly	Pro	Ala	Phe 20		Leu	Phe	Leu	11e 25	Thr	Val	Ala	Gly	Asp 30		Leu
Arg	Val	Ile 35		Leu	Val	Ala	Gly 40	Ala	Phe	Phe	Trp	Leu 45	Val.	Ser	Leu
Leu	Leu 50	Ala	Ser	Val	Val.	Trp 55	Phe	Ile	Leu	Val	His 60	Val.	Thr	Asp	Arg
Ser 65	Asp	Ala	Arg	Leu	Gln 70	Tyr	Gly	Leu	Leu.	Ile 75	Phe	Gly	Ala	Ala	Val 80
Ser	Val	Leu	Ĺeu	Gln 85	Glu	Val	Phe	Arg	Phe 90	Ala	туг	туг	Lys	Leu 95	Leu
Lys	Lys	Ala	Asp 100	Glu	Gly	Leu	Ala	Ser 105	Leu <del>.</del>	Ser	Glu	Asp	Gly. 110	Arg.	Ser
Pro	Ile	Ser 115	Ile	Arg	Gln	Met	Ala 120	Tyr	Val-	Ser	Gly	Leu 125	Ser.	Phe	Gly
Ile	Ile	Ser	Gly	Va1	Phe	Ser	Val	Ile	Asn	Ile	Leu	Ala	Asp	Ala	Leu

	1	30					1	. 35						1	10					
G1 14	.у F 15	'ro	G)	ly Va	al V	al G	ly I 50	le	His	5 G)	Ly A	sp	Ser 155	r Pı	:o 1	yr	Т	r P	he Le 16	
Th	r s	er	Al	a Ph	ne Lo	eu Ti 55	nr A	la	Ala	ıl	e I	le 70	Leu	l Le	u H	lis	Th		ne Tr 75	F
Gl	у۷	al	Va	l Ph	e Pi	ne As	sp A	la	Cys	Gl 18	u A: 5	rg	Arg	Ar	g T	yr	Tr 19	р А] 0	la Le	u
Gl	y L	au	Va 19	1 Va 5	l G1	y Se	r H	is	Leu 200	Le	u Ti	ır	Ser	Gl		eu 05	Th	r Ph	e Le	1
Ası	n Pi 2:	ro 10	Tr	р Ту	r Gl	u Al	a Se	er 15	Leu	Le	u Pr	0	Ile	Ту 22		la	۷a	l Th	r Val	L
Se:	r Me ō	≱t	Gly	y Le	u Tr	p Al 23	a Ph O	ie .	Ile	Thi	r Al	.a (	Gly 235	Gl	y Se	er	Lei	ı Ar	g Ser 240	
Ile	e Gl	.n	Arq	g Sei	т Ха 24	a Le	и Су	's l	Lys	Asp	•									
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	1>																			
	2>																			
			_	sapi	ens															
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	Pr			Arg	Pro	Val	Me	t A	la	Pro	Arg	; S	er	Leu	Le	u I	Leu	Leu 15	Leu	
Ser	Gl	y A	la	Leu	Ala	Leu	Thi	c A	sp	Thr			la (	Gly	Se:	r F	lis		Leu	
				20						25							30			
Arg	Туз	. P	he 35	Ser	Thr	Ala	Val	L S	er . 40	Arg	Pro	G	ly i	Arg	G1 <sub>3</sub>		lu	Pro	Arg	
Tyr	11e	2 A	la	Val	Glu	Tyr	Val 55	. A:	sp i	Asp	Thr	G	ln I	Phe 60	Leu	ı A	rg	Phe	Asp	
Ser 65	Asp	A.	la	Ala	Ile	Pro 70	Arg	Me	et (	Glu	Pro		rg (3	Slu	Pro	Т	rp	Val	Glu 80	
Gln	Glu	G:	ly	Pro	Gln 85	Tyr	Trp	Gl	lu I	rp	Thr 90	Th	nr G	ly	Туг	A	la	Lys 95	Ala	
Asn	Ala	G]	ln	Thr 100	Asp	Arg	Val	Al		eu 05		As	n L		Leu				Tyr	

Asr	Gln	Ser	Glu	Ala	Gly	Ser			Leu	Gln	Gly	Met	Asn	Gly	Cy
		115					120					125	•		
Asp	Met	Gly	Pro	Asp	Gly	Arg	Leu	Leu	Arg	Gly	Tyr	His	Gln	His	. Ala
	130					135			_	•	140				
Tur		GI.	T	200		T1-	C			<b>~</b> 1	-				
145	Asp	Gry	Бyз	ռեր	150	116	261	reu	ASI	155		Leu	Arg	ser	160
							1								
Thr	Ala	Ala	Asp			Ala	Gln	Ile			Arg	Phe	Tyr		
				165					170					175	•
Glu	Glu	Tyr	Ala	Glu	Glu	Phe	Arg	Thr	Tyr	Leu	Glu	Gly	Glu	Cys	Leu
			180					185					190		
Glu	Leu	Leu	Ara	Ara	Tvr	Leu	Glu	Asn	Glv	T.ve	Glu	Thr	Len	Gla	7.50
		195			-1-		200		0.27	2,3		205	Deu	Gin	ALG
		_	_	_											
Ala	Asp 210	Pro	Pro	Lys	Ala	His 215	Val	Ala	His	His	Pro 220	Ile	Ser	Asp	His
						213					220				
Glu	Ala	Thr	Leu	Arg		Trp	Ala	Leu	Gly		Tyr	Pro	Ala	Glu	Ile
225					230					235					240
Thr	Leu	Thr	Trp	Gln	Arg	Asp	Gly	Glu	Glu	Gln	Thr	Gln	Asp	Thr	Glu
			_	245	-	_	•		250					255	
TAN	Val	G1		3 ma	D===	21.		1 1							
neu	Val	Giu	260	Arg	PLO	MIG	GTÅ	265	GIY	THE	Pne	Arg	270	GIY	
				•		-			. •	:					
<210	)> 14	32													
	l> 45						-								•
	2> PR														
~21.	3> Hc	uno s	apre	ns					-						
	> 14											-			
	His	Ala	Ser		Ala	Prọ	Glu	Gln		Pro	Arg	Prọ	Pro		Leu
1				5		-			10					15	
Leu	Arg	Arg	Asp	Leu	Glu	Arg	Lys	Thr	Pro	Ala	Arg	Arg	Pro	Ala	Leu
			20					25				•	30	-	

Ala Ser Leu Pro Thr Gly His Thr Ala Pro Pro Pro Arg Pro Arg Cys

Ala Arg Pro Val Arg Cys Thr Pro Ala Cys Trp Arg Leu Arg Arg

45

40

35

6	a Ar 5	g Pi	:O G	ly Le	u Lei 70	u Le	u Ar	g Al	a Th	r Me 7		r Se	r Ar	g I1	.e Al
Ar	g Al	a Le	eu Al	a Le	u Va:	l Va	l Th	r Le		u Hi O	s Le	u Th	r Ar		u Al 5
Le	ı Se	r Th	r Cy 10	s Pr	o Ala	a Ala	a Cys	5 Hi	s Cy 5	s Pro	) Le	u Gl	u Al.		o Ly
Суя	s Ala	a Pr ll	o Gl 5	y Va	l Gly	Leu	1 Val	L Ard	g As	p Gly	у Суз	Gl <sub>3</sub>		s Су:	s Ly
	13(	,			n Leu	135	•				140	).			
145					/ Leu 150					155	•	•			160
				165					170	)				175	
			180	)	Gln			185					190		
		195	•		Ile		200					205			
	210				Leu	215					220				
225					Gln 230					235					240
				245	Met				250					255	
			260		Ser			2 <b>65</b>					270		
		275			Gly		280					285			
	290					295					300				
105					Trp :					315					320
le	Ser	Thr	Arg	Val 325	Thr i	Asn .	Asp .	Asn	Pro 330	Glu	Cys	Arg		Val 335	Lys

Glu Thr Arg Ile Cys Glu Val Arg Pro Cys Gly Gln Pro Val Tyr Ser 340 345 350

Ser Leu Lys Lys Gly Lys Lys Cys Ser Lys Thr Lys Lys Ser Pro Glu 355 360 365

Pro Val Arg Phe Thr Tyr Ala Gly Cys Leu Ser Val Lys Lys Tyr Arg 370 375 380

Pro Lys Tyr Cys Gly Ser Cys Val Asp Gly Arg Cys Cys Thr Pro Gln 385 390 395 400

Leu Thr Arg Thr Val Lys Met Arg Phe Arg Cys Glu Asp Gly Glu Thr 405 410 415

Phe Ser Lys Asn Val Met Met Ile Gln Ser Cys Lys Cys Asn Tyr Asn 420 425 430

Cys Pro His Ala Asn Glu Ala Ala Phe Pro Phe Tyr Arg Leu Phe Asn  $435 \hspace{1.5cm} 440 \hspace{1.5cm} 445 \hspace{1.5cm}$ 

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Asp Ile His Lys Phe Arg Asp 450 455

<210> 1433

<211> 87

<212> PRT

<213> Homo sapiens

<400> 1433

Thr Glu Gly Glu Thr Trp Arg Ser Asp Ser Glu Val Arg Leu Gln Leu 1 5 10 15

Ala His His Leu Arg Pro Gly Pro Asp Glu Pro Pro Val Ala Ser Ala 20 25 30

Gly Ala Ala Ala Ser Arg Gly Ala Cys Gly Pro Ser His Ser Arg
35 40 45

His Cys Leu Pro Ala Gly Leu Glu Pro Ser Glu Arg Pro Asn Pro Arg
50 60

Pro Gly Arg Asp Leu Arg Gly Met Thr Ala Glu Pro Pro Lys Gly Gly 65 70 75 80

Glu Phe Glu Gly Arg Gly Pro

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 Val Trp Arg Ala Gly Ala Gly Met Ala Ser Leu Arg Ser Gln His Gly
 Pro Gly Ala Pro Glu Ser Leu Arg Lys Val Leu Met Pro Ser Ser Met
 Gly Leu Leu Ile Leu Tyr Ala Arg Leu Pro Pro Ser Leu Val Gly
Gln Ala Gly Arg Trp Ile Gly Trp Ala Gly Arg Ala Gly Gln Ala
                        55
Val Arg Gln Pro Ser Pro Thr Val Leu Ile Asp Gly Val Glu Cys Ser
                    70
                                       75
Asp Val Lys Phe Phe Gln Leu Ala Ala Gln Trp Ser Ser His Val Lys
His Phe Pro Ile Cys Ile Phe Gly His Ser Lys Ala Thr Phe
        100
                              105
<210> 1435
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<213> Homo sapiens
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Gly Ser Gln Asp Ala Arg Arg Gly Ser Gly Leu Gly Val Ser Ser Phe
Leu Arg Gly Ser Gly Gly Ser Gly Pro Leu Trp Val Gln His Gly Lys
                               25
Arg Gly Arg Tyr Phe Ser Ser Trp Ala Phe Ile Lys Glu Lys Thr Met
                           40
Leu Ala Gly Arg Gly Gly Ser Arg Leu Gln Ser Gln His Phe Gly Arg
```

Pro Arg Arg Val Asp His Leu Arg Ser Gly Val Gln Asp Gln Pro Gly 65 70 75 80

Gln His Gly Glu Thr Pro Ser Leu Leu Lys Asn Thr Lys Ile Ser Gln Val Trp Trp Leu Thr Leu Met . 100 <210> 1436 <211> 413 Carlot of the Ca <212> PRT <213> Homo sapiens <400> 1436 Asn Glu Cys Thr Gly Pro Glu Phe Arg Val Asp Pro Arg Val Ala Ser 15 Ala Pro Arg Ala Gln Ser Leu Ala Phe Ala Asp Pro Pro Pro Val His 20 25 -- 30 Thr Arg Arg Gln Leu Thr Met Asp Asp Asp Ile Ala Ala Leu Val Val Asp Asn Gly Ser Gly Met Cys Lys Ala Gly Phe Ala Gly Asp Asp Ala Pro Arg Ala Val Phe Pro Ser Ile Val Gly Arg Pro Arg His Gln Gly 65 - 70 - 75 Val Met Val Gly Met Gly Gln Lys Asp Ser Tyr Val Gly Asp Glu Ala 90 Gln Ser Lys Arg Gly Ile Leu Thr Leu Lys Tyr Pro Ile Glu His Gly 100 Ile Val Thr Asn Trp Asp Asp Met Glu Lys Ile Trp His His Thr Phe Tyr Asn Glu Leu Arg Val Ala Pro Glu Glu His Pro Val Leu Leu Thr 135 Glu Ala Pro Leu Asn Pro Lys Ala Asn Arg Glu Lys Met Thr Gln Ile 145 150

Ser Gly Asp Gly Val Thr His Thr Val Pro Ile Tyr Glu Gly Tyr Ala

Met Phe Glu Thr Phe Asn Thr Pro Ala Met Tyr Val Ala Ile Gln Ala

Val Leu Ser Leu Tyr Ala Ser Gly Arg Thr Thr Gly Ile Val Met Asp

180

. 170

185 . 190

		19	5				200	)				20	5		
Leu	21	o Hi: O	s Ala	a Ile	e Leu	215	j Led	l Asi	) Lei	ı Ala	a Gly	y Ar	g Asp	) Le	J Thr
Asp 225	Ту	r Lei	ı Met	Lys	11e	Leu	Thr	Glo	a Arg	Gly 235		c Sei	r Phe	Thi	Thr 240
Thr	Alá	Glu	Arg	Glu 245	Ile	Val	Arg	Asp		Lys	Glu	Lys	Leu	Cys 255	Tyr
Val	Ala	Leu	Asp 260	Phe	Glu	Gln	Glu	Met 265		Thr	Ala	Ala	Ser 270	Ser	Ser
Ser	Leu	Glu 275	Lys	Ser	Tyr	Glu	Leu 280	Pro	Asp	Gly	Gln	Val 285		Thr	Ile
Gly	Asn 290	Glu	Arg	Phe	Arg:	Cys 295	Pro	Glu	Ala	Leu	Phe 300	Gln	Pro	Ser	Phe.
Leu 305	Gly	Met	Glu	Ser	Cys 310	Gly	Ile	His	Glu	Thr 315	Thr	Phe	Asn	Ser	Ile 320
Met	Lys	Cys	Asp	Val 325	Asp	Ile	Arg	Lys	Asp 330	Leu	Tyr	Ala	Asn	Thr 335	Val
Leu	Ser	Gly	Gly 340	Thr	Thr	Met	Tyr	Pro 345	G1y	Ile	Ala	Asp	Arg 350	Met	Gln
Lys	Glu	Ile 355	Thr	Ala	Leu	Ala	Pro 360	Ser	Thr	Met	Lys	Ile 365	Lys	Ile	Ile
Ala	Pro 370	Pro	Glu	Arg	Lys	Tyr 375	Ser	Val	Trp		Gly 380	Gly	Ser	Ile	Leu
Ala :	Ser	Leu	Ser	Thr	Phe (	Gln	Gln.	Met		Ile 395	Ser	Lys	Gln		Туг 400
Asp (	Glu	Ser	Gly	Pro :	Ser :	Ile	Val 1	His.	Arg :	Lys	Cys	Phe			

<sup>&</sup>lt;210> 1437

<sup>&</sup>lt;211> 97

<sup>&</sup>lt;212> PRT

<sup>&</sup>lt;213> Homo sapiens

<sup>&</sup>lt;220>

<sup>&</sup>lt;221> SITE

<sup>&</sup>lt;222> (28)

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Gln Ser Ala Val Leu Met Ala Thr Gly Phe Ile Trp Ser Arg Tyr Ser

100 105 110 Leu Val Ile Ile Pro Lys Asn Trp Ser Leu Phe Ala Val Asn Phe Phe 115 120 Val Gly Ala Ala Gly Ala Ser Gln Leu Phe Arg Ile Trp Arg Tyr Asn 135 Gln Glu Leu Lys Ala Lys Ala His Lys 150 <210> 1439 <211> 343 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (244) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (305) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (325) <223> Xaa equals any of the naturally occurring L-amino acids <220> 7 . <221> SITE <222> (328) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (340) <223> Xaa equals any of the naturally occurring L-amino acids <400> 1439 Trp Ile Gln Arg Ile Arg Ala Arg Gly Lys Thr Asn Leu Arg Arg Thr 10 15 Thr Tyr Leu Val Leu Asp Glu Ala Asp Arg Met Leu Asp Met Gly Phe 25 Glu Pro Gln Ile Arg Lys Ile Val Asp Gln Ile Arg Pro Asp Arg Gln

		i	45					40				5	3		
u Al	ı Le	Gln		val	Glu	Lys	Pro		Th:	r Ala	) Se	t Trį	Me	Leu 50	Th
u Gl:		Ala		Ile		Ile	His	Ile		s Asp 70	ı Lys	e Lei	Phe		Glu 6
	ні: 9:	Cys	Val	Asp		Ile 90	Gln	Leu		Asn	His 85	a Asr	Ala	Ser	Let
: Sei		11e	Glu	G1u	Met		Arg 105	Ile	Leu	ı Lys		Asp 100	Lys	. Glu	Va]
			125					120	Ile	Thr	Lys		115	Lys	Glu
								Arg	Met 135	Lys	Arg	Thr		Glu 130	Asp
⊢Glu (160	Asn	Leu	Val	Trp	Asp 155	Arg	Glu	Gln	Gln	Ser 150	Lys	Asp	Gly	His	11e
	Ala 175	Val	Asp	Thr	Ala	Ile 170	Leu	Ile	Pro	Ala	Lys 165	Gly	His	Lys	Phe
Tyr		Туг 190	Asn	Ile	Val.	Phe	Lys 185	·Val	Asp	Glu		Asp 180	Leu	Gly	Arg
•	•		205					200		Asp	•		195		
				220					215	Thr				210	
240					235					Leu 230					225
	255					250				Leu	245				
		270					265			Gly		260			
			285					280		Gly	•		275		
				300					295					290	
Glv	Phe	Ser	Glv	Asn (	Thr	Phe	Lvs	Cvs	Ala	Ser	Tvr	Glv	Gly	Asn	Xaa

WO 00/55350 PCT/US00/05882

1517

305 310 315 320 Ser Asn Phe Gly Xaa Cys Trp Xaa Ser Gly Pro Val Leu Gly Leu Gly 325 330 Ile Pro Thr Xaa Ala Leu Pro 340 <210> 1440 <211> 122 <212> PRT <213> Homo sapiens <400> 1440 Ile Cys Val Ser Ala Arg Arg Ala Leu Ser Gly Leu Glu His Gly Leu Gly Trp Glu Arg Val Trp Glu Lys Met Gly Asn Lys Glu Pro Gly Ser 25 His Gly His Arg Ser Asp Ala Asp Pro Ser Arg Phe Ser Pro Val Leu Pro Pro Ala Val Gln Leu Gly Val Trp Arg Glu Glu Gly Arg Gly Gly 50 Ser Cys Pro Phe Ser Trp Gly Arg Gly Pro Val Ser Ser Thr Trp Leu Phe Pro Lys Gly Ser Lys Arg Glu Gly Leu Gly Glu Lys Thr Met Glu Arg Gly Pro Ala Lys Glu Asn Arg Glu Glu Val Ser Gly Leu Ile Ser 105 Leu Leu Ser Arg Cys Ser Gly Ser Leu Ile 115 120 <210> 1441 <211> 74 <212> PRT <213> Homo sapiens

Gly His Arg His Thr Pro Pro His Leu Ala Asn Phe Tyr Tyr Phe Phe

10

<400> 1441

Су	s Arc	g Ası	9 Glu 20	ı Vai	l Sei	Le	ı Cys	25 25		Tr	se:	Gli	7 Thi		o Val
Let		Gl:	n Ser	Sei	His	Let	1 Gly	ser	Leu	Sei		Gl <sub>3</sub>		e Ile	: Gly
	Ser 50				Arg		His	val	. Cys		Let			. Lev	ı Arg
710		. Was													
			;		70		Asp					=:.			
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<21	0> 1	442				-								-	
	1> 1														
			sapi									-	-		•
~21	3- n	Omo	sapı	ens											
<22	.0>					;						٠.		-	
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	2> (	•													
<22	3> X	aa e	qual	s'.an	y of	the	nat	ural	JA o	ccur	ring	L-a	mino	aci	ds
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<22	1> ·S	ITE -	4.		** -										
	1> ·S 2> (							• :					*		. •
<22	2> (	3)						,	·				mino	aci	ds
<22 <22	2> ( 3> X	3) aa e	qual:	s an	y of	the	nat	ural	·	ccur	ring		mino	aci	ds
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<22 <22 <40	2> ( 3> X 0> 1 Xaa	3) aa e 442	qual	s an	y of	the	nat	ural	ly o	cur	ring	L-a			
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<22 <22 <40 Ala 1 Pro	2> ( 3> X 0> 1 Xaa Arg	3) aa e 442 Xaa Cys Thr	qual His Gly 20 Arg	Gln 5 Arg Glu Leu	y of Pro Ser Ala	ser Arg	nat Leu Thr Ala 40	Lys Ser 25 Gly	Gly 10 Gly Val	Thr	ring Lys Pro Trp	L-and Ala Gly Cys 45	Gly Leu 30 Asp	Ala 15 Gln Leu	Pro Glu Gly
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Leu His Ala Ala Ala Cys Ala Ala Ala Met Ser Leu Val Ile Pro Glu
10 15 ...
Lys Phe Gln His Ile Leu Arg Val Leu Asn Thr Asn Ile Asp Gly Arg
      20
                         25
Arg Lys Ile Ala Phe Ala Ile Thr Ala Ile Lys Gly Val Gly Arg Xaa
                      40
Tyr Ala His Val Xaa Leu Arg Lys Xaa Xaa Ile Asp Leu Thr Xaa Arg
                  55 60
Ala Xaa Glu Leu Thr Xaa Asp Xaa Val Glu Arg Val Ile Thr Ile Met
75
Gln Asn Xaa Arg Gln Tyr Lys Ile Pro Asp Trp Phe Leu Asn Arg Gln
                 90
Asn Asp Xaa Xaa Asp Xaa Ser Thr Ser Ser
       100
                   105
<210> 1444
<211> 14
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<213> Homo sapiens
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Pro Val Trp Pro Lys Trp Ser Gly Trp Pro Leu Ala Leu Pro
             5
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  <213> Homo sapiens
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 Phe Leu Arg Leu Val Leu Gly Leu Leu Ile Gly Arg Cys Leu Gln Glu
Met Leu Lys Leu Gly Thr Leu Pro Pro Thr Ser Lys Pro Gln Leu Leu
              20
                                  25
Cys Gln Met Val Ser Leu Lys Ile Ser Ala Cys Leu Thr Thr Lys Gly
Lys Tyr Val Val Phe Phe Phe Tyr Pro Leu Asp Phe Thr Phe Val Cys
     50
                         55
Pro Thr Glu Ile Ile Ala Phe Ser Asp Arg Ala Glu Glu Phe Lys Lys
Leu Asn Cys Gln Val Ile Gly Ala Ser Val Asp Ser His Phe Cys His
Leu Ala Trp Val Asn Thr Pro Xaa Lys Gln Gly Gly Leu Gly Pro Met
            100
Asn Ile Pro Leu Val Ser Xaa Pro Thr His Xaa Xaa Ser Gly
        115
                            120
                                                125
```

<21	0>	1446													
	1> 9														
	2> 1														
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			Jupi												
<22	0>														
		ITE						-							
		92)			_			_	_						
~22	3 <i>&gt;</i> 2	aa e	equai	s an	y of	the	nat	ural	.ly c	ccur	ring	L-a	mino	aci	lds
-10	٥. ١														
		, гуз	GIU		Asn	Leu	Leu	His			Asp	Thr	Gly		
1				5					10	)				15	•
Met	Thr	Arg	Glu	Glu	Leu	Val	Lys	Asn	Leu	Gly	Thr	Ile	Ala	Lys	Ser
			20					2-5					30	ν	
Gly	Thr			Phe	Leu	Asn	Lys	Met	Thr	Glu	Ala	Gln	Glu	Asp	Gly
	•	35	,	-		- * .	40		11.		:	45			
-									-						
Gln	Ser	Thr	Ser	Asp	Leu	Ile	Gly	Gln	Phe	Gly	Val	Gly	Phe	Tyr	Ser
	50		1.7			- 55	:	٠.,	:::		60	_		: :	
Ala	Phe	Leu	Val	Ala	Asp	Lys	Val	Ile	Val	Thr	Ser	Lvs	His	Asn	Asn
65					-70	•			: : -:	7.5		-4-			80
							:								•
Asp	Thr	Gln	His	Ile	Trp	Glu	Ser	Asp	Ser	Asn	Xaa	Phe	Ser	Val	Aen
-			:	- 85					90					95	
					-									,,	
Cys															
- 1 -			-					٠.							
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-210	)> 1														
	> 4														
	> P							•		٠.,	•				
~ 2 1 3	> H	omo	sapi	ens									•		
- 4 0 0															
	> 1			_ `											
	Ser	Arg	His		Gly	Val	Phe	Leu		Pro	Leu	Leu	Ala	Met	Ser
1				5					10					15	
Ser	His	Lys		Phe	Arg	Ile	Lys		Phe	Leu	Ala	Lys	Lys	Gln	Lys
	•		20					25					30		
					Pro									Lys	
		35					40					45			

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 Val Phe Arg Val Glu Ala Trp Arg Thr Ser Gly Glu Thr Pro Ala Ile
                                                           15
 Ser Pro Ser Lys Arg Ala Arg Pro Ala Glu Val Gly Gly Met Gln Leu
 Arg Phe Ala Arg Leu Ser Glu His Ala Thr Ala Pro Thr Arg Gly Ser
          35
                              40
 Ala Arg Ala Ala Gly Tyr Asp Leu Tyr Ser Ala Tyr Asp Tyr Thr Ile
 Pro Pro Met Glu Lys Ala Val Lys Thr Asp Ile Gln Ile Ala Leu
 65
                      70
Pro Ser Gly Cys Xaa Gly Arg Val Ala Pro Arg. Ser Gly Leu Ala Ala
Lys His Phe Ile Asp Val Gly Xaa Val Ser
            100
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<211> 60
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<221> SITE
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```

<22 <22	1> s 2> ( 3> x 0> 1	44) aa e	equal	.s an	y of	the	nat	ura.	Lly o	occui	crinç	j L-a	amino		ds
Thr 1		Ala	Val	Gly 5		Asn	Lys	Arg	Let 10		Lys		/ Gly	Lys 15	_
Gly	Ala	Lys	Lys 20	Lys	Val	Val	Asp	Pro 25					.30		
Asp	Val	Lys 35	Ala	Pro	Ala	Met	Phe 40	Xaa	Ile		, Xaa		Gly		
Leu	Val 50	Thr	Arg		Gln		Thr	Lys	Ile	Ala	Ser 60	-		٠.	
	)> 14 l> 45						:					-		· · ·	٠
	2> . PI			1 .			1	-		-		. * =			: .
<213	3> Ho	omo :	sapi	ens											
<400	)>. 14	150 :						_		4.					
Asn	Phe	Gly	Ser	Leu	Leu	Gly	Ala	Cys	Leu	Ile	Leu	Gln	Ile	Thr	Thr
1				5					10					15	
	<b>.</b>		_												
GIĀ	Leu	Pne	20	Ala	Met	His	Tyr	Ser 25		Asp	Ala	Ser	Thr 30	Ala	Phe
Ser	Ser	Ile 35	Ala	His	Ile	Thr	Arg 40	Asp	Val	Asn	туr	Gly 45			
<210 <211 <212 <213	> 34 > PR	T:	apie	ns											
				-		. •								- 3	
<400 Lys 1	Leu	Leu	Asp			Gly	Asn	Ile	Ala 10	Glu	Glu	Leu	Ser	Ile 15	Leu
Lys	Trp .	Asn	Thr 20	Asp	Ser	Val	Glu	Glu 25			Ser		Lys 30	Leu	Glu
Arg :	Ile														

<220> <221> SITE

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 Pro Arg Val Arg Leu Xaa Asp Glu Thr Asn Ile Cys Asn Gly Lys Pro
 Val Asp Gly Leu Thr Thr Leu Arg Asn Gly Thr Leu Val Ala Phe Arg
                                25
 Gly His Tyr Phe Trp Met Leu Ser Pro Phe Ser Pro Pro Ser Pro Ala
         35
                            40
 Arg Arg Ile Thr Glu Val Leu Gly Asn Pro Phe Pro His
                        55
<210> 1453
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<213> Homo sapiens
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Arg Glu Gln Lys Leu Glu Leu His Arg Gly Ala Ala Ala Leu Glu Leu
 1
                           10
Val Asp Pro Pro Gly Cys Arg Asn Ser Ala Arg Gly Cys Ser Glu Pro
Arg Ser His His Cys Thr Pro Val Trp Ala Thr Glu
        35
                            40
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                                             <222> (98)
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                                    <220>
     <221> SITE
     <222> (99)
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     <223> Xaa equals any of the naturally occurring L-amino acids
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     <220>
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     <222> (111)
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     <400> 1454
                                                            Control of the control of the control
     Thr Arg Val Ala Pro Ser Val Leu Arg Leu Ala Met Thr Ser Tyr Ser
                                                                                          10
     Tyr Arg Gln Ser Ser Ala Thr Ser Ser Phe Gly Gly Leu Gly Gly
                   20- 25_-- - 30
    Ser Val Arg Ile Gly Pro Gly Val Ala Phe Arg Ala Pro Ser Ile His
                         35
    Gly Gly Ser Gly Gly Arg Gly Val Ser Val Ser Ser Ala Arg Phe Val
                                                             5.5
    Ser Ser Ser Ser Gly Gly Tyr Gly Gly Gly Xaa Gly Gly Val Leu
      65
                                                     70
                                                                                                75
                                                                                           n sturm
    Thr Ala Ser Xaa Gly Leu Leu Ala Gly Asn Glu Lys Leu Thr Met Gln
                                                                                          90
                                                                                                                                      Asn Xaa Xaa Thr Ala Trp Leu Leu Leu Xaa Lys Phe Ala Pro Xaa Gly
                                100
                                                                            105
    Ala Lys Gly Thr Lys Ser
```

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Ala Xaa Glu Asn Ser Arg Ile Val Leu Gln Ile Asp Asn Ala Arg Leu
                  5
                                     10
Ala Ala Asp Asp Phe Arg Thr Lys Phe Glu Thr Glu Gln Ala Leu Arg
Met Xaa Val Glu Ala Asp Ile Asn Gly Leu Xaa Arg Cys Trp Met Ser
         35
                             40
                                                45
```

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<220>
<221> SITE
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	2> ( 3> X	aa (	•	ls ar	ny of	the	nat	ural	.ly c	ccur	rin	g L-	amino	aci	ds
<10	0> 1												-		
Gly	Asp		Sei	r His	Туг	Tyr	Thr	Thr			Asp	Le	ı Arç	, Asp	Lys
1				5	•				10					15	•
Ile	Leu	Gly	7 Ala	Thr	·Ile	Glu	Asn	Ser 25		Tle	Val	Leu			Asp
			- `					23					30		
Asn	Ala	3.5			Ala		Asp 40					4.5			
٠.							*								
	50	•			Ser	55					60	ı			
							. 1 :						. ;		
65					Thr					75					0.0
21															
				85	Glu				90					95	
Glu	T10	60.0	mb -			<b></b>						. <u>.</u>		*.	
GIU.	116		100		Arg										Glu
Val				Pro								_	_		
	vah	115	ALG	PIG	Gly	THE	120	Leu.				125			
AIG	Ser 130	Xaa	Tyr	Glu	val	Met 135	Ala	Xaa		Asn					
											170				
<210	> 14	57													
<211															
<212															
<213		mo :	заріс	ens											
<220															
<221	> si	TE													
<222	> (2	1)													
<223	> Xa	a e	quals	any	of	the	natu	rall	у ос	curr	ing	L-an	nino	acid	s
<400	> 14	57					· ·	٠	:						
Gly (		Val	Gly	Val 5	Arg	Pro	Ser		His 10	Pro	Ala	Thr	Ser	Thr 15	Ala
Ser (	Gly :		Ala 20	Xaa	Pro	Thr	Leu .	Ala . 25	Arg .	Ala	Met	Ala	Ser	Val	
			~ •					د 2.				·	30		
Glu I	Leu i	Ala	Cys	Ile	Tyr	Ser .	Ala :	Leu :	Ile 1	Leu	His	Asp	Asp	Glu	Val

35 40 45 Thr Val Thr Glu Asp Lys Ile Asn Ala Leu Ile Lys Ala Ala Gly Val 55 Asn Val Glu Pro Phe Trp Pro Gly Leu Phe Ala Lys Ala Leu Ala Asn Val Asn Ile Gly Ser Leu Ile Cys Asn Val Gly Ala Gly Gly Pro Ala 85 90 Pro Ala Ala Gly Ala Ala Thr Ser Arg Arg Ser Cys Pro Leu His Cys 105 Cys Cys Ser Ser 115 <210> 1458 <211> 115 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (47) <223> Xaa equals any of the naturally occurring L-amino acids <400> 1458 Leu Val Pro Asn Ser Ala Arg Ala Ala Ala Ser Ala Ala Asp Ala Ala Ala Met Arg Tyr Val Ala Ser Tyr Leu Leu Ala Ala Leu Gly Gly Asn 20 25 Ser Ser Pro Ser Ala Lys Gly Ile Lys Lys Ile Leu Asp Asn Xaa Gly Ile Glu Ala Asp Asp Asp Arg Leu Asn Lys Val Ile Ser Glu Leu Asn 85 90

Gly Lys Asn Ile Glu Asp Val Ile Ala Gln Gly Ile Gly Lys Leu Ala Ser Val Pro Ala Gly Gly Ala Val Ala Val Ser Ala Ala Pro Gly Ser Ala Ala Pro Ala Ala Gly Ser Ala Pro Ala Ala Ala Glu Glu Lys Lys 100 105

Asp	Gl	u Ly	5												
		115	5												
			-												
<21	٥>	1459				P									
<21															
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			:												
<b>\</b> 21	3-	ното	sapi	ens		*			•						
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<22	2>	(115)													
<22	3>	Xaa e	equal	s an	y of	the	nat	ural	ly c	occur	ring	L-a	mino	aci	ds
-22	, . ^-														
<22		STTE		-											
		(123)													
			qual	e an	v of	+he	nat	ural	100 0		rina	T _ =	mino	201	de
	-		·quu.	. u	, 01	ciie	nac	urar	-y C	ccui	119	L-a		acı	us
<22	0>														
<22	1> :	SITE	:. '			- : :		;· .	:	-		· _			
<22	2>	(126)													
<22.	3> :	Xaa e	qual	s an	y of	the	nat	ural	ly o	ccur	ring	L-a	mino	aci	ds
<22															
		517E (129)						•		:	•	•			
			gual			+ 5 0			1		-:	T 2		:	<b>.</b>
			guar.	5 an	y OI	Lile	na c	urar	ıy O	CCUI	TING	L-a.	III TIIO	acı	us
<40	)> :	1459													
Ala	Se	r Asp	Ala	Leu	His	Ser	Leu	Ser	Ala	Pro	Val	Leu	Arg	Leu	Ser
1				5					10					15	
Ser	Ar	g Ser	Ala	Ala	Arg	Pro	Ala	Thr	Met	Thr	Glu	Gln	Ala	Ile	Ser
			20					25					30		
	_ •				-	_									
Phe	Ala	_	Asp	Phe	Leu	Ala	_	Gly	Ile	Ala	Ala		Ile	Ser	Lys
		35					40					45			
Thr	A):	1751	Ala	Dro	T10	G1.v	n	1703	T ***	T 011	T 011	T our	Gl n	1703	C1-
- 111				PIO			_					Deu	GIII	vai	GIII
	٠,	•				,,,									
His	Ala	Ser	Lys	Gìn	Tle	Ala	Ala	Asp	Lvs	Gln	TUT	Lvs	Glv	Tle	Val
65			-1-		70				-,-	75	-,-	-,-	,		80
															•
Asp	Cys	· Ile	Val	Arg	Ile	Pro	Lys	Glu	Gln	Gly	Val	Leu	Ser	Phe	Trp
-	-			85			-		90					95	•
Arg	Gly	Asn	Leu	Ala	Asn	Val	Ile	Arg	Tyr	Phe	Pro	Thr	Gln	Ala	Leu
	•		100					105					110		

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Asn Phe Xaa Phe Lys Asp Lys Tyr Lys Gln Xaa Phe Leu Xaa Gly Val
  Xaa Lys His Thr
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<222	> (	117)	)												
<223	> X	aa e	equa l	ls ar	ny of	f the	e nat	tural	lly (	occui	ring	g L-a	amino	ac:	ids
<220	>														
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<222	> (	119)													
<223				s an	y of	the	nat	ural	ly o	occur	ring	J L−a	mino	aci	.ds
<220>	>														
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<223>	> X	aa e	qual	s an	y of	the	nat	ural	ly o	occur	ring	L-a	mino	aci	ds
<220>		-													
<221>															
<222>	• (	121)	: _			• •		. :	٠.		. " :		:: `	·	
<223>	· X	aa e	qual	s an	y of	the	nat	ural	ly c	ccur	ring	L-a	mino	aci	ds
<400>															
Xaa S	er	Xaa	Lys	Thr	Gly	Phe	Xaa	Asp	Trp	Ile	Ser	Val	Ala	Tyr	Tyr
1 -		٦.	• •	5	- ,-	2	-	. 11	- 10	t =	io ·		11:3	. 15	- :
Gly C	ys				Gly	Ala	Thr	Ile	Ile	Gln	Val	Gly	Lys	Leu	Ile
			20					25					30		
		٠.													
Lys. G	lu		Ala	Gly	Lys	Ser	Asn	Leu	Lys	Arg	.Va:l	Thr	Leu	Glu	Leu
		35					40					45			
C1 C		•			_			_							
Gly G	50 50		Ser	Pro	Cys			Leu	Ala	Asp			Leu	Asp	Asn
	3 U					55				·	60				
n1- 1/	- 1	63	Dha.	21-		***	^								
Ala V	aı	GIU	Pne	ALG	70		GIY	val	Pne			GIn	GIÅ	GIn	
03	-			_	. 10		_			75		<b>.</b>			80
Cys I	le	Ala	Ala	Xaa	Ara	Tle	Phe	Val	Glu	Glu			T11-	A.c.n	C1
-2-				85				Val	90		Jei	116	TYL	95	
														,,	
Phe V	al	Arq	Arq	Ser	Val	Glu	Ara	Val	Lvs	Xaa	Tle		T.en	G] ម	Yaa
		-	100				9	105	-4-				110	<b>-</b> 1	
										٠.					
Pro Le	eu	Thr	Pro	Xaa	Val	Xaa	Xaa	Xaa	Pro	Ser	Asp				•
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                                 25
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Cys	Val 50	Leu	. Lys	lle	Gly	Glu 55	His	Thr	Pro	Ser	Ala 60	Leu	Ala	Ile	Met
G1u 65	Asn	Ala	Asn	Val	70		Arg		Ala	Ser 75	Ile	Cys	Gln	Gln	Asn 80
Gly	Ile	Val	Pro	Ile 85					Ile 90	Leu	Pro	Asp	Gly	Asp 95	His
Asp		Lys	Arg 100	Leu	Xaa	Val	Cys	Asp :105	Arg	Lys	Gly		Trp		Ala
	Thr	Arg 115	Leu	Leu	Ser	Asp	His 120	His	Ile	Tyr	Leu	Xaa 125	Gly	Thr	Leu
Leu	Lys 130	Pro	·Asn	Met:	Val	Pro 135	Gln	Ala	Met	Leu	Ala 140	Leu	Xaa	Ser	Phe
Xaa 145		Lys			150					155		Xaa			160
Ala	Gln	Xaa	Pro	Pro 165	Arg	Leu	Ser	Leu	Gly 170	Ile	Asn	Xaa	Xaa	Cys 175	Xaa
Gly		Pro			ı			<del>.</del> .				-			
<211 <212	)> 14 .> 31 !> PR	T			-		٠								
<213		mo s	apie	ns											
	> si			. 🗷											
	> (1 > Xa	aeq	uals	any	of 1	the i	natu	rall	y oc	curr:	ing 1	L-am:	ino	acid	s
	> 14														
Ala 1	Asn .	Ser :	Leu - A	Ala (	Cys (	3ln (	3ly I		Tyr 1	Chr∵1	Pro 1	(aa (	Gly (	31n <i>1</i> 15	Ala
Gly	Ala .	Ala i	Ala s 20	Ser (	Slu S	er I	Leu E	he 1	/al s	Ser A	Asn F	lis A	Ala :	ľyr	

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 Ile Ala Pro Tyr Asp Ile Gly Gly Pro Asp Gln Glu Phe Gly Val Asp
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Xaa Gly Pro Val Xaa Phe Leu
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   Leu Leu Asp Arg Phe Thr Glu Asp Ala Lys Arg Lew Tyr Gly Ser Glu
                            35 40
                                                                                                                                           45
   Ala Phe Ala Thr Asp Phe Gln Asp Ser Ala Ala Ala Lys Lys Leu Ile
                                                                        55
   Asn Asp Tyr Val Lys Asn Gly Thr Arg Gly Thr Ile Thr
     65
                                                          70
                                                                                                                   75 '
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Gly Ser Arg Gly Asp Pro Gly Pro Pro Gly Pro Pro Pro Val Ile Leu
                              40
 Pro Gly Met Lys Asp Ile Lys Gly Glu Lys Gly Asp Glu Gly Pro Met
      50
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 Gly Leu Lys Gly Tyr Leu Gly Ala Lys Gly Ile Gln Gly Met Pro Gly
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Val Trp Glu Thr
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_	_														
		SITE													
		(80)													
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				_										13	
Ala	Phe	Asn	Ala	Thr	Glu	Acn	A 1 =	G1 n	The	T 011	۸۳۵	T	A 1 -	W-4	*
			20			p	niu	25	1111	Deu	ALG	Lys	30	met	Lys
-		-	20					23					30		
G1	T 0.11	G1	mh	»	<b>~</b> 3	•		-1.		_		_		_	
GIY	ьеи	Gly		ASD	GIU	Asp		iie	116	-Ser	vai		Ala	Tyr	Arg
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	· .														
Asn	Thr	Ala	Gln	Arg	Gln	Glu	Ile	Arg	Thr	Ala	Leu	Gln	Glu	His	His
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	50					55 - · <sub>-</sub>					60			٠	:
	50					55 - · <sub>-</sub>					60			٠	:
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Ser 65 Trp <210 <211 <212 <213 <220 <221 <222	50 Ala Xaa  3> 1 > 8 > P > H > S > ()	Gly 468 3 RT omo s	Asp	Leu	Val 70	55 Leu	Arg	Asn	Gly	75	Xaa	Phe	Val	Xaa	: Xaa 80
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WO 00/55350

1539

PCT/US00/05882

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                             40
                                                 45
Ser Thr Glu Ile Asn Gln Leu Ile Ala Gly Val Asn Xaa Cys Pro Val
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Pro Xaa Xaa
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1541

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_																
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		SIT	n 120													
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		SIT												2		
		(88	•													
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\L_L	<b>3</b> -	_aa	Φ,	inar	5 . a.i.)	A OT	Cire	nat	uraı	TA O	ccur	ring	L-a	WTUG	acı	as :
<40	٥.	147	,										• • •			
						-1-	<b></b> , .		_	_		_	.•		_	
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1					5					10					15	
<b>~1</b>							_	_	_		_					
GIY	гА	s T	nr		Ala	xaa	Pro	Asn			Ala	Leu	Gln		Ile	Pro
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_	_				_											
Leu	Se			Ala	Gly	Ser	Asn		Glu	Glu	Ala	Arg	Thr	Asp	Arg	Pro
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				-	-											
Ser	Gl	n G	ln	Leu	Arg	Ser	Leu	Asn	Gly	Glu	Trp	Asp	Ala	Pro	Cys	Ser
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Gly	Ala	a Le	eu	Ser	Ala	Ala	Gly	Val	Val	Val	Thr	Arg	Ser	Val	Thr	Ala
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Thr	Let	A)	La	Ser	Ala	Leu	Ala	Xaa	Ala	Pro	Phe	Ala	Phe	Phe	Pro	Ser
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Phe Leu Ala Thr Phe Ala Gly Phe Pro Arg Gln Ala Leu Asn Xaa Gly
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        35
                           40
                                              45
Leu Ala Xaa Val Leu Gln Arg Arg Asp Trp Glu Asn Pro Gly Val Thr
Gln Leu Asn Arg Leu Ala Xaa His Pro Xaa Phe Ala Ser Trp Arg Asn
65
                   70
                                     75
Ser Xaa Lys Ala Arg Thr Asp Arg Pro Ser Gln Gln Leu Arg Ser Leu
Asn Gly Lys Trp Asp Xaa Pro Cys Xaa Gly Ala Leu Xaa Xaa Ala Gly
           100
                             105
                                                110
```

Va]	. xaa	a Val		Xaa	хаа	Xaa	Thr		Thr	Let	ı Ala	xaa 125		Let	ı Ala	3
Pro	130	Pro	Phe	Ala	Phe	Phe 135		.ser	Phe	: Xaa	Ala 140		Phe	Ala	Gly	,
Dha	D		- 61 -			_	_		_							
145	PIC	Arg	GIN	Ala	. Xaa 150		Arg	GIY	Leu	155		i Gly	Phe	Arg	160	
Xaa	Ala	Leu	Arg	Asp	Leu	Xaa	Pro	Gln	Lys 170		Leu	Ile		Gly 175		,
Gly	Ser	Xaa							·	٠.		•			•	
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												•				
<21	0> 1	473														
<21	1> 5	8														
<21	2> P	RT														
<21	3> н	omo	sapi	ens												
- 4 0	0- 1	477													2	
	0> 1		C1	A	C		<b>61.</b> -	<b>.</b>	<b>.</b>	•	<b></b>			_		
1	Ala	ser	GIĂ	Arg 5	Ser	Arg	GIY	ser	10		Thr	Tyr	Ala	Cys 15		
Arg	Arg	His	Ser	Ser	Ser	Ile	Val	Ser	Pro	Lys	Phe	Asn	Ser	Leu	Ala	
			20					25					30			
7 s 1	17=1	TAN	Cln	2	2	200	m	<b>C1</b>	3	D	G1	77a 1	mb	<b>01</b> -	·	
'aı	Val	35	GIR	AIG	Arg	Asp	40	GIU	ASN	Pro	GIY	45	Thr	GIn	.Leu	
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Asn	Arg 50	Leu	Ala	Ala	His	Pro 55	Pro	Phe	Ala					٠.		
		-														
210	)> 14	174														
	L> 70															
	2> PI									•	. –					
213	3> но	omo s	apie	ens												
	-					_										
	)> 14															
le	Ala	Ser	Gly	Arg	Ser	Arg	Gly	Ser	Lys	Leu	Thr	Tyr	Ala	Cys	Met	
1		٠.		. ∴5										15		
	Ar~	ui-	ce-	e	e	T1-	17.0.3	Ca	D=-	T	Db -	3.0-	Ca-	<b>.</b>		
ar y	AL G	HIS	20	ser	Ser	TIG	var		Pro		ьиe	ASN	30	reu	Ala	
al	Val		Gln	Arg	Arg .	Asp		Glu	Asn	Pro	Gly		Thr	Gln	Leu	
		35					40					45				

```
Asn Arg Leu Ala Ala His Pro Pro Phe Ala Ser Trp Arg Asn Ser Glu
     50
                                              60
Glu Ala Arg Thr Asp Arg
 65
                     70
<210> 1475
<211> 62
<212> PRT
<213> Homo sapiens
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<400> 1475
Leu Pro Xaa Ala Xaa Tyr Thr Xaa Xaa Gly Thr Thr Pro His Tyr Arg
```

```
. 15
  1
                              10
Glu Ser Trp Tyr Ala Cys Arg Tyr Arg Ser Gly Ile Pro Gly Ser Thr
          20
                . 25
                             His Ala Ser Glu Lys Lys Lys Lys Lys Lys Lys Lys Lys Arg Xaa
 · . 35 ..
Asp Asp Leu Glu Asp Pro Lys Leu Thr Tyr Xaa Xaa Met Gln
 . 50
                   55
<210> 1476
<211> 80
<212> PRT
<213> Homo sapiens
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<222> (8).
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<222> (29)
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<223> Xaa equals any of the naturally occurring L-amino acids
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<221> SITE
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35

Arg Arg Asp Trp

```
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 <221> SITE
 <222> (73)
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 <400> 1476
 Ile Arg Xaa Xaa Xaa Leu Arg Xaa Asp Thr Thr His Tyr Arg Glu Ser
                  5
Trp Tyr Ala Cys Arg Tyr Arg Ser Gly Ile Pro Gly Xaa Thr His Ala
                                  25
Ser Val Glu Ile Cys Pro Pro Xaa Ser Arg Pro Xaa Ser Ser Gln Ser
         35
                             40
                                                 45
Asn Gly Glu Gly Tyr Ser Xaa Cys Arg Arg Pro Gln Ala Leu Glu Ala
Ala Thr Tyr Leu Asn Pro Val Pro Xaa Arg Ile Leu Leu Lys Pro Phe
                     70
                                         75
<210> 1477
<211> 52
<212> PRT
<213> Homo sapiens
<400> 1477
Arg Gln Val Pro His Glu Arg Ala Val Arg Asp Gly Arg Gly Gly Gly
Arg Ser Arg Gly Ser Lys Leu Thr Tyr Ala Cys Met Arg Arg His Ser
             20
                                 25
Ser Ser Ile Val Ser Pro Lys Phe Asn Ser Leu Ala Val Val Leu Gln
```

40

45

<223> Xaa equals any of the naturally occurring L-amino acids

```
<210> 1478
<211> 154
<212> PRT
<213> Homo sapiens
<220>
<221> SITE
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<223> Xaa equals any of the naturally occurring L-amino acids
<400> 1478
Ile Ala Ser Gly Arg Ser Arg Gly Ser Lys Leu Thr Tyr Ala Cys Met
      . 5
                                 10
                                                 15
Arg Arg His Ser Ser Ser Ile Val Ser Pro Lys Phe Asn Ser Leu Ala
Val Val Leu Gln Arg Arg Asp Trp Glu Asn Pro Gly Val Thr Gln Leu
                          40
Asn Arg Leu Ala Ala His Pro Pro Phe Ala Ser Trp Arg Asn Ser Glu
   50
Glu Ala Arg Thr Asp Arg Pro Ser Gln Gln Leu Arg Ser Leu Asn Gly
Glu Trp Asp Ala Pro Cys Ser Gly Ala Leu Ser Ala Ala Gly Val Val
           85
                                 90
Val Thr Arg Ser Val Thr Ala Thr Leu Ala Ser Ala Leu Ala Pro Ala
                            105
Pro Phe Ala Phe Pro Ser Phe Leu Ala Thr Phe Ala Gly Phe Pro
                         120
Arg Gln Ala Leu Asn Arg Gly Leu Pro Leu Gly Xaa Arg Phe Lys Cys
   130 135
```

<210> 1479 <211> 130 <212> PRT <213> Homo sapiens

Phe Thr Asp Leu Asp Pro Lys Lys Leu Asp 145

<220>

1551

<221> SITE

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 <400> 1479
 Ile Ala Gly Gly Arg Ser Arg Gly Ser Lys Leu Thr Tyr Ala Cys Met
 Arg Arg His Ser Ser Ser Ile Val Ser Pro Lys Phe Asn Ser Leu Ala
                                  25
 Val Val Leu Gln Arg Arg Asp Trp Glu Asn Pro Gly Val Thr Gln Leu
                              40
 Asn Arg Leu Ala Ala His Pro Pro Phe Ala Ser Trp Arg Asn Ser Glu
Glu Ala Arg Thr Asp Arg Pro Ser Gln Gln Leu Arg Ser Leu Asn Gly
 65
                     70
                                         75
Glu Trp Asp Ala Pro Cys Ser Gly Ala Leu Ser Ala Ala Gly Val Val
Val Thr Arg Ser Val Thr Ala Thr Leu Ala Lys Arg Pro Lys Arg Pro
            100
                                105
Phe Leu Ser Leu Ser Ser Phe Leu Phe Xaa Pro Arg Ser Ala Gly Phe
        115
                             120
Ser Pro
   130
<210> 1480
<211> 131
<212> PRT
<213> Homo sapiens
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<222> (103)
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<220>
<221> SITE
<222> (112)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
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		(127)													
<22	3> 2	⟨aa ∈	equal	s an	y of	the	nat	ural	ly o	ccur	ring	L-a	mino	aci	ds
<22	0>														
<22	1> 5	SITE									•				
		(129)													
				e an		t bo	n = +		1						
	J- /	iaa e	equal	S an	y or	tne	nat	urai	TA O	ccur	ring	L-a	wino	acı	as
-10	0> 1	400													
					_	_		_							
		ser	Gly			Arg	GIĀ	Ser		Leu	Thr	Tyr	Ala	Cys	Me
1				5					10			Ä		15	
_															
Arg	Arg	His	Ser		Ser	Ile	Val	Ser	Pro	Lys	Phe	Asn	Ser	Leu	Al
			20					25					30		
Val	Val	Leu	Gln	Arg	Arg	Asp	Trp	Glu	Asn	Pro	Gly	Val	Thr	Gln	Le
		35					40				_	45			
Asn	Arg	Leu	Ala	Ala	His	Pro	Pro	Phe	Ala	Ser	Trp	Ara	Asn	Ser	G1
	50					55					60				
Glu	Ala	Ara	Thr	Asp	Ara	Pro	Ser	Gln	Gln	T.eu	A = a	Sar	Ten	Acn	G1.
65					70			<b>U</b>	<b>J</b>	75	AL 9	261	Leu	A3II	80
					,,					,,					01
Glu	Tra	Acn	Ala	Dro	Cvc	Ca=	C1	21-	*	C			<b>~1</b>	1	
O.Lu	110	тэр	ALG	85	cys	ser	GTÅ	AIA		ser	Ala	АТА	GIY		Va.
				65					90					95	
1	<b></b>		_												
vaı			Ser		Thr	хаа					Ala			Pro	Xaa
		• •	100	٠.,		-		.105					110	•	-
_															
Pro	Phe		Phe	Phe	Leu	Leu		Arg	His	Gly	Arg	Pro	Ala	Xaa	Pro
		115					120					125			
Xaa	Lys	Leu							-			• .			
	130														
<210	> 14	481								. :	-			٠	
<211	> 13	12													
<212	> PI	<b>T</b>													
<213	> Hc	omo s	apie	ns											
<220	>											_			
	> s1	י. יווים								•				•	
	- 31 > (1														
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- 2 2 3	- Xā	ıa eç	uals	any	01	tne	natu	rall	у ос	curr	ıng	L-am	ıno	acid	s
220				•								٠,٠,٠	:		
	> SI														
222	> (8	8)													

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 1481

Xaa Ser Ser Arg Ser Arg Ala Ala Arg Ser Arg Gly Ser Lys Leu Thr
1 5 10 15

Tyr Ala Cys Met Arg Arg His Ser Ser Ser Ile Val Ser Pro Lys Phe 20 25 30

As Ser Leu Ala Val Val Leu Gln Arg Arg Asp Trp Glu Asn Pro Gly  $35 \hspace{1cm} 40 \hspace{1cm} 45$ 

Val Thr Gln Leu Asn Arg Leu Ala Ala His Pro Pro Phe Ala Ser Trp 50 55 60

His Asn Ser Glu Glu Ala Arg Thr Asp Arg Pro Ser Gln Gln Leu Arg
65 70 75 80

Ser Leu Asn Gly Glu Trp Asp Xaa Pro Cys Ser Gly Ala Leu Ser Ala 85 90 95

Ala Gly Val Val Thr Arg Ser Val Thr Ala Thr Leu Ala Ala Pro 100 105 110

<210> 1482

<211> 53

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (17)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (26)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (50)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 1482

Glu Asn Val Lys Ala Lys Ile Gln Asp Lys Glu Gly Ile Pro Pro Glu

```
1
                5
                                   10
                                                  15
 Xaa Ser Arg Glu Leu Asn Leu Cys Leu Xaa Lys Gln Leu Gly Arg Met
             20 25 30
 Gly Arg Tyr Phe Val Leu Asn Leu Gln Tyr Phe Lys Arg Gly Ser Tyr
                           40
 Phe Xaa Ile Leu Cys
    50
 <210> 1483
 <211> 61
 <212> PRT
 <213> Homo sapiens
<220>
<221> SITE
<222> (56)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (59)
<223> Xaa equals any of the naturally occurring L-amino acids
Ala Asn Met Gln Ile Phe Val Lys Thr Leu Thr Gly Lys Thr Ile Thr
Leu Glu Val Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile
Gln Asp Lys Glu Gly Ile Pro Pro Asp Gln Gln Arg Leu Ile Phe Ala
                           40
Gly Lys Gln Leu Glu Gly Trp Xaa Gln Leu Xaa Gln Thr
                      55
<210> 1484
<211> 27
<212> PRT
<213> Homo sapiens
<220>
<221> SITE
<222> (6)
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<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (13)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (20)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (22)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (23)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 1484
Gly Glu Gly Pro Thr Xaa Pro Leu Pro Ser Glu Thr Xaa Gly Asp Val
                   5
                                      10
Ala Pro Leu Xaa Cys Xaa Xaa Gly Leu Asn Met
             20
<210> 1485
<211> 45
<212> PRT
<213> Homo sapiens
<220>
<221> SITE
<222> (12)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (24)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (30)
<223> Xaa equals any of the naturally occurring L-amino acids
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<220>

<221> SITE

<222> (34)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 1485

Phe Leu Ala Ala Gly Asn Pro Leu Arg Trp Pro Xaa Ile Leu Thr Ser 1 5 10 15

Arg Trp Lys Ser Asp Ile Tyr Xaa Arg Lys Ser Asp Gly Xaa Tyr Ile 20 25 30

Ile Xaa Leu Lys Arg Thr Trp Glu Lys Leu Leu Gly
35 40 45

<210> 1486

<211> 140

<212> PRT

<213> Homo sapiens

<400> 1486

Pro Arg Val Arg Arg Ala Glu Trp Leu Cys Gly Arg Val Ser Glu Thr
1 5 10 15

Gly Ser Ala Cys Ser Met Ala Asp Gln Leu Thr Glu Glu Gln Ile Ala 20 25 30

Glu Phe Lys Glu Ala Phe Ser Leu Phe Asp Lys Asp Gly Asp Gly Thr 35 40 45

Ile Thr Thr Lys Glu Leu Gly Thr Val Met Arg Ser Leu Gly Gln Asn 50 55 60

Pro Thr Glu Ala Glu Leu Gln Asp Met Ile Asn Glu Val Asp Ala Asp 65 70 75 80

Gly Asn Gly Thr Ile Asp Phe Pro Glu Phe Leu Thr Met Met Ala Arg 85 90 95

Lys Met Lys Asp Thr Asp Ser Glu Glu Glu Ile Arg Glu Ala Phe Arg 100 105 110

Val Phe Asp Lys Asp Gly Asn Gly Tyr Ile Ser Ala Ala Glu Leu Arg 115 120 125

His Val Met Thr Asn Leu Gly Arg Glu Val Asn Arg 130 135 140

1557

```
<210> 1487
  <211> 36
 <212> PRT
 <213> Homo sapiens
 <220>
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 <222> (1)
 <223> Xaa equals any of the naturally occurring L-amino acids
 <220>
 <221> SITE
 <222> (8)
 <223> Xaa equals any of the naturally occurring L-amino acids
 <220>
 <221> SITE
 <222> (13)
 <223> Xaa equals any of the naturally occurring L-amino acids
 <220>
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 <222> (16)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (19)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (35)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 1487
Xaa Leu Gly Arg Asn Trp Ala Xaa Phe Thr Gly Lys Xaa Val Gly Xaa
 1
                  5
                                    10
Ala Ser Xaa Asn Val Tyr Val His Ile Pro His Leu Arg Asn Ser His
             20
                                 25
Glu Lys Xaa Ser
         35
<210> 1488
```

<211> 34 <212> PRT <400> 1488

<213> Homo sapiens

10

Ser Gly Pro Leu Trp Ile Leu Gly Asp Val Phe Ile Gly Arg Tyr Tyr

```
Thr Val Phe Asp Arg Asp Asn Asn Arg Val Gly Phe Ala Glu Ala Ala
                                  25
 Arg Leu
<210> 1489
<211> 160
<212> PRT
<213> Homo sapiens
<220>
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<222> (4)
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<220>
<221> SITE
<222> (5)
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<220>
<221> SITE
<222> (8)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
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<222> (160)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 1489
Pro Thr Asn Xaa Xaa Lys Ser Xaa Glu Leu His Arg Gly Gly Gly Arg
Ser Arg Thr Ser Gly Ser Pro Gly Leu Gln Glu Phe Gly Thr Ser Thr
            20
                                 25
Gln Arg Pro Val Asp Ile Val Phe Leu Leu Asp Gly Ser Glu Arg Leu
Gly Glu Gln Asn Phe His Lys Ala Arg Arg Phe Val Glu Gln Val Ala
                       55
                                            60
```

Arg Arg Leu Thr Leu Ala Arg Arg Asp Asp Pro Leu Asn Ala Arg 65 Val Ala Leu Leu Gln Phe Gly Gly Pro Gly Glu Gln Gln Val Ala Phe 85 90 Pro Leu Ser His Asn Leu Thr Ala Ile His Glu Ala Leu Glu Thr Thr 105 110 Gln Tyr Leu Asn Ser Phe Ser His Val Gly Ala Gly Val Val His Ala 115 120 Ile Asn Ala Ile Val Arg Ser Pro Arg Gly Gly Ala Arg Arg His Ala 135 Glu Leu Pro Ser Trp Ser Ser Arg Thr Ala Ser Arg Ala Thr Thr Xaa 150 155 160

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<210> 1490
<211> 105
 <212> PRT
<213> Homo sapiens
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<220>
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<222> (49)
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<220>
<221> SITE
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<220>
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<220>
<221> SITE
<222> (62)
<223> Kaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (65)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (82)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (86)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (99)
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<220>
<221> SITE
<222> (101)
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Ala Gln Met Gly Met Leu Lys Gly Pro Leu Leu Asn Lys Phe Leu Thr
Thr Ala Lys Asp Lys Asn Arg Trp Glu Asp Xaa Gly Lys Gln Leu Tyr
Asn Val Glu Ala Thr Ser Tyr Xaa Leu Xaa Ala Leu Leu Gln Leu Lys
         35
                             40
Xaa Phe Asp Phe Val Pro Pro Val Val Xaa Xaa Leu Asn Xaa Gln Arg
     50
                         55
```

Xaa Tyr Gly Gly Gly Tyr Gly Ser Thr Gln Ala Thr Phe Met Val Phe
65 70 75 80

Gln Xaa Leu Ala Gln Xaa Gln Lys Asp Gly Pro Asp His Gln Ala Leu 85 90

Asn Leu Xaa Val Xaa Leu Gln Met Leu 100 105

<210> 1491

<211> 125

<212> PRT

<213> Homo sapiens

<400> 1491

Arg Asn Thr Leu Ile Ile Tyr Leu Asp Lys Val Ser His Ser Glu Asp l 1 5 10 15

Asp Cys Leu Ala Phe Lys Val His Gln Tyr Phe Asn Val Glu Leu Ile 20 25 30

Gln Pro Gly Ala Val Lys Val Tyr Ala Tyr Tyr Asn Leu Glu Glu Ser 35 40 45

Cys Thr Arg Phe Tyr His Pro Glu Lys Glu Asp Gly Lys Leu Asn Lys 50 60

Leu Cys Arg Asp Glu Leu Cys Arg Cys Ala Glu Glu Asn Cys Phe Ile 65 70 75 80

Gln Lys Ser Asp Asp Lys Val Thr Leu Glu Glu Arg Leu Asp Lys Ala 85 90 95

Cys Glu Pro Gly Val Asp Tyr Val Tyr Lys Thr Arg Leu Ala Arg Phe 100 105 110

Lys Leu Ser Asn Asp Phe Asp Arg Val His His Gly His 115 120 125

<210> 1492

<211> 68

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (62)

```
<223> Xaa equals any of the naturally occurring L-amino acids
 <400> 1492
 Arg Pro Thr Arg Pro Ala Leu Ser Ile Ile Ala Leu Glu Ile Gln Ala
                                     10
Gln Lys Cys Val Glu Leu Thr Glu Gly Ile Glu Cys Leu Gln Thr His
                                 25
Ser Lys Ile Asn Gly Arg Asp Leu Thr Phe Trp Gln Glu Leu Val Ser
Lys Cys Leu Thr Glu Tyr Ser Ser Lys Gln Ser Gly Ser Xaa Pro Asn
                         55
                                              60
Val Pro Glu Val
 65
<210> 1493
<211> 74
<212> PRT
<213> Homo sapiens
<220>
<221> SITE
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<220>
<221> SITE
<222> (17)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (29)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (52)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (55)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
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 <222> (62)
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 <220>
 <221> SITE
 <222> (63)
 <223> Xaa equals any of the naturally occurring L-amino acids
<220>
 <221> SITE
 <222> (74)
 <223> Xaa equals any of the naturally occurring L-amino acids
 <400> 1493
Glu Glu Ile Gln Lys His Asn His Ser Lys Ser Thr Trp Xaa Asp Pro
                  5
                                     10
                                                         1.5
Xaa Thr Thr Arg Cys Thr Asn Leu Thr Lys Phe Leu Xaa Glu Ala Ser
                                 25
Leu Val Gly Glu Glu Val Leu Arg Gly Thr Ser Leu Glu Val Thr Leu
         35
                             40
Leu Glu Glu Xaa Leu Arg Xaa Val Arg Gly Thr Phe Thr Xaa Xaa Pro
Lys Gly Lys Leu Phe Pro Lys Thr Phe Xaa
                    70
<210> 1494
<211> 54
<212> PRT
<213> Homo sapiens
<220>
<221> SITE
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<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (49)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 1494
Asp Ala Thr Ser Pro Ile Ile Glu Glu Leu Ile Thr Phe His Asp His
1
                5
                                    10
```

1564

Ala Leu Ile Ile Ile Phe Leu Ile Cys Phe Leu Val Leu Tyr Ala Leu  $20 \hspace{1cm} 25 \hspace{1cm} 30$ 

Phe Leu Thr Leu Thr Thr Lys Leu Thr Asn Thr Asn Ile Xaa Asp Ala 35 40 45

Xaa Glu Ile Glu Thr Val 50

<210> 1495

<211> 38

<212> PRT

<213> Homo sapiens

<400> 1495

Phe Phe Gly His Pro Glu Val Tyr Ile Leu Ile Leu Pro Gly Phe Gly
1 5 10 15

Ile Ile Ser His Ile Val Thr Tyr Tyr Ser Gly Lys Lys Glu Pro Phe 20 25 30

Gly Tyr Ile Gly Met Val

<210> 1496

<211> 46

<212> PRT

<213> Homo sapiens

<400> 1496

Ala Phe Tyr His Ser Ser Leu Ala Pro Thr Pro Gln Leu Gly Gly His  $1 \hspace{1cm} 5 \hspace{1cm} 10 \hspace{1cm} 15$ 

Trp Pro Pro Thr Gly Ile Thr Pro Leu Asn Pro Leu Glu Val Pro Leu 20 25 30

Leu Asn Thr Ser Val Leu Leu Ala Ser Gly Val Ser Ile Thr 35 40 45

<210> 1497

<211> 60

<212> PRT

<213> Homo sapiens

<400> 1497

1565

Ala Gln Val Gly Leu Gln Asp Ala Thr Ser Pro Ile Ile Glu Glu Leu 5 10 Ile Thr Phe His Asp His Ala Leu Ile Ile Ile Phe Leu Ile Cys Phe 25 Leu Val Leu Tyr Ala Leu Phe Leu Thr Leu Thr Thr Lys Leu Thr Asn Thr Asn Ile Ser Asp Ala Gln Glu Ile Glu Thr Val 55 <210> 1498 <211> 45 <212> PRT <213> Homo sapiens <400> 1498 Thr Tyr Glu Tyr Thr Asp Tyr Gly Gly Leu Ile Phe Asn Ser Tyr Ile 10 Leu Pro Pro Leu Phe Leu Glu Pro Gly Asp Leu Arg Leu Leu Asp Gly 25 Asp Asn Arg Val Val Leu Pro Ile Glu Ala Pro Phe Val 35 40 <210> 1499 <211> 69 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (63) <223> Xaa equals any of the naturally occurring L-amino acids <400> 1499 His Arg Leu Asp Phe Leu Gln Leu Met Ile Asp Ser Gln Asn Ser Lys Glu Thr Glu Ser His Lys Ala Leu Ser Asp Leu Glu Leu Ala Ala Gln 25

Ser Ile Ile Phe Ile Phe Ala Gly Tyr Glu Thr Thr Ser Ser Val Leu 35 40 45

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Ser Phe Thr Leu Tyr Glu Leu Ala Thr His Pro Asp Val Gln Xaa Lys
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  Leu Gln Lys Gly Asp
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  Ala Arg Xaa Asp Leu Glu Xaa Gln Ile Glu Gly Leu Asn Glu Xaa Ala
  Ser Leu Thr
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Thr Pro Ala Ser Thr Met Ser Ile Lys Val Thr Gln Lys Ser Tyr Lys
                                  25
Xaa Ser Thr Ser Ser Pro Arg Ala Phe Ser Ser Arg Ser Tyr Thr Asn
         35
                              40
Xaa Pro Gly Ser Arg Ile Asn Xaa Ser Xaa Phe Ser Arg Ile Gly Ser
                         5.5
Ser Asn Xaa Xaa Ser Gly Leu Gly Gly Gly Tyr Xaa Gly Ala Ser Xaa
                     70
                                         75
Met Xaa Gly Ile Thr Ala Val Thr Val Asn Gln Ser Leu Leu Xaa Pro
Leu Xaa Leu Glu Val Asp Pro Asn Ile Gln Ala Val Arg Thr Gln Glu
            100
Lys Glu Gln Ile Xaa Thr Leu Asn Asn Lys Phe Ala Ser Ser
        115
                           120
                                                125
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Gln Arg Asn Ser Xaa Gly Ser Arg Thr Xaa Xaa Ser Arg Xaa Xaa Cys
Lys Xaa Val Ala Met Phe Ser Trp Asp Pro Xaa Leu Val Xaa Gly Gly
Gly Ala Ser Lys Met Ala Val Ala His Ala Leu Xaa Glu Lys Ser Xaa
Ala Met Asp Trp Cys Gly Asn Asn Gly His Thr Gly Leu Leu Xaa Arg
     50
                                              60
Ala Leu Xaa Val His Ser Ser Xaa Pro Trp Ile Xaa Lys Leu Trp Gly
                     70
Xaa Ser His His
<210> 1503
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<222> (70)

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 Val Gly Val Leu Gly Leu Asp Leu Trp Gln Val Lys Ser Gly Thr Ile
 Phe Asp Asn Phe Leu Ile Thr Asn Asp Glu Ala Tyr Ala Glu Glu Phe
Gly Asn Glu Thr Trp Gly Val Thr Lys Ala Ala Glu Lys Gln Met Lys
         35
Asp Lys Gln Asp Glu Glu Gln Arg Leu Lys Glu Glu Glu Asp Lys
  50
                         55
Lys Arg Lys Glu Xaa Xaa
 65
<210> 1504
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<400> 1504

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Asn Thr Leu Xaa Tyr Xaa Met Lys Ala Thr Xaa Ile Leu Leu Xaa
Ala Gln Leu Ser Trp Ala Gly Pro Phe His Gln Thr Gly Leu Leu Asp
              20
                                  25
Ser Met Leu Glu His Glu Ala Tyr Xaa Ile
         35
                             40
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<223> Xaa equals any of the naturally occurring L-amino acids
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Xaa His Xaa Asp Cys Ser Xaa Pro Ile Val Ala Ala Gly Val Gly Glu
 1
                  5
                                    10
```

1573

```
Phe Glu Ala Gly Ile Ser Lys Asn Gly Gln Thr Arg Glu His Ala Leu
              20
                                  2.5
 Leu Ala Tyr Thr Leu Gly Val Lys Gln Leu Ile Val Gly Xaa Asn Lys
 Met Asp Ser Thr Glu Pro Pro Tyr Ser Gln Lys Arg Tyr Glu Glu Ile
      50
                   5.5
 Xaa Lys Glu Val Ser Thr Tyr Xaa
  65
 <210> 1506
 <211> 23
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 Ala Glu Thr Arg Lys Arg Lys Gly Leu Lys Glu Gly Ile Pro Ala Leu
                                     10
 Asp Asn Phe Leu Asp Lys Leu
             20
<210> 1507
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Ile Val Val Ile Gly His Val Asp Ser Gly Lys Ser Thr Thr Gly
             20
                                25
His Leu Ile Tyr Lys Cys Gly Gly Ile Asp Lys Arg Thr Ile Glu Lys
Phe Glu Lys Glu Ala Ala Glu Met Gly Lys Gly Ser Phe Lys Tyr Ala
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55

Trp Val Leu Asp Lys Leu Lys Ala Glu Arg Glu Arg Gly Ile Xaa Ile 65 70 75 80

Gly Tyr Leu Leu Val Glu Ile 85

<210> 1508

<211> 110

<212> PRT

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Pro Asp Pro Xaa Ile Phe Ala Pro Pro Ile Ser Ala Pro Pro Pro Ser 1 5 10 15

Ser Gly Thr Arg Asp Arg Ser Gln Arg Ser Leu Asp His Tyr Glu Pro 20 25 30

Pro Val Gln Pro Arg Gly Pro Cys Pro Arg Ser Phe Glu Leu Leu Val

Arg Ala Val Gly Ala Ala Ala Ala Ala Asp Ala Ala Arg Ala His Arg
50 55 60

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Gln Arg Trp Ser Cys Arg Cys Cys Val Xaa Arg Ala Ala Leu Pro Phe
   65
                                          75
  Val Tyr Arg Pro Arg Lys Glu Ser Ile Pro Lys Met Ile Ser Asn Xaa
 Gln Val Xaa Ala Ile Gly Pro Thr Val Leu Gln Xaa Gly Lys
              100
                                  105
                                                      110
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<400> 1509 Ser Phe Val Glu Leu Pro Leu Ala Ser Ile Val Ser Leu His Ala Ser 10 Ser Xaa Gly Gly Arg Leu Gln Thr Ser Pro Xaa Pro Ile Gln Xaa Thr 20 25 Pro Pro Lys Asp Thr Cys Ser Pro Xaa Leu Xaa Met Ser Leu Xaa Pro 45 Xaa Lys Leu Cys Arg Arg Arg His Gly Pro Trp Tyr 50 <210> 1510 <211> 116 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (91) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (92) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (108) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (115) <223> Xaa equals any of the naturally occurring L-amino acids <400> 1510 Gly Thr Ser Ser Ser Gln Arg Phe Tyr Lys Glu Asn Leu Gly Gln Gly 1 Trp Met Thr Gln Lys His Glu Arg Met Lys Val Tyr Val Pro Thr Gly Phe Ser Ala Phe Pro Phe Glu Leu Leu His Thr Pro Glu Lys Trp Val 35 40 45

Arg Phe Lys Tyr Pro Lys Leu Ile Ser Tyr Ser Tyr Met Val Arg Gly

50 55 60 Gly His Phe Ala Ala Phe Glu Glu Pro Glu Leu Leu Ala Gln Asp Ile 65 70 75 Arg Lys Phe Leu Ser Val Leu Glu Arg His Xaa Xaa Thr Pro Leu Pro Pro Leu Ala Thr Ser Pro His Asn Ala Leu Gln Xaa Phe Leu Gly Glu Asp Asn Xaa Phe 115 <210> 1511 <211> 156 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (11) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (104) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (143) <223> Xaa equals any of the naturally occurring L-amino acids <400> 1511 Arg Glu Gln Lys Leu Glu Leu His Arg Gly Xaa Gly Arg Ser Arg Thr 1 Ser Gly Ser Pro Gly Leu Gln Glu Phe Gly Thr Arg Asp Arg Gly Gly Phe Pro Pro Arg Gly Pro Arg Gly Ser Arg Gly Asn Pro Ser Gly Gly 40 Gly Asn Val Gln His Arg Ala Gly Asp Trp Gln Cys Pro Asn Pro Ser 55 Ile Gly Asp Phe Cys Cys Asp Val Ile Val Cys Arg Gly Cys Gly Asn 70 75

```
Gln Asn Phe Ala Trp Arg Thr Glu Cys Asn Gln Cys Gly Asp Arg Gly
 Arg Gly Gly Pro Gly Gly Met Xaa Gly Gly Arg Gly Gly Leu Met Asp
             100
                                 105
 Arg Gly Gly Pro Gly Gly Met Phe Arg Gly Gly Arg Gly Gly Asp Arg
                             120
                                                125
Gly Gly Phe Arg Gly Gly Arg Gly Met Asp Arg Gly Gly Phe Xaa Gly
Gly Arg Arg Gly Gly Pro Gly Gly Pro Leu Asp Leu
145
                    150
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1579

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Pro Gly Cys Gly Tyr Phe Cys Thr Ala Gly Thr Phe Leu Glu Cys His
                  85
Pro Asp Phe Arg Val Ala His Arg Phe His Lys Ala Cys Val Ser Gln
           100
                                105
Leu Asn Gly Met Val Phe Cys Pro His Cys Gly Glu Asp Thr Ser Glu
        115
                            120
Ala Gln Xaa Val Thr Ile Pro Gly Val Thr Gly
    130
                        135
<210> 1514
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Ile Arg His Glu Ser Ile Ser Gly Ala Ser Xaa Lys Asp Ile Val His
                                     10
Ser Gly Xaa Ala Tyr Thr Xaa Glu Xaa Ser Ala Arg Gln Xaa Met Arg
                                 25
Thr Ala Met Lys Xaa Asn Leu Gly Xaa Asp Leu Arg Thr Ala Ser Tyr
Xaa Asn Ala Ile Xaa Xaa Val Phe Lys Val Tyr Xaa Glu Ala Gly Val
     50
                         55
Thr Phe Thr Xaa Met Xaa His Gly
                     70
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<220> <221> SITE

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<210> 1515
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Leu Tyr Pro Pro Ala Cys Ser Ala Thr Arg Thr Pro Ser Thr Met Thr
                                     10
Thr Ser Ala Ser Ser His Leu Asn Lys Gly Ile Lys Gln Val Tyr Met
                                 25
Ser Leu Pro Gln Gly Glu Lys Val Gln Ala Met Tyr Ile Trp Ile Asp
Gly Thr Gly Glu Gly Leu Arg Cys Lys Thr Arg Thr Leu Asp Ser Glu
     50
                        55
Pro Lys Cys Val Glu Glu Leu Pro Glu Trp Asn Phe Asp Gly Ser Ser
                                         75
Thr Xaa Gln Ser Xaa Gly Ser Ser
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<211> 105
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<223> Xaa equals any of the naturally occurring L-amino acids

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Gly Arg Glu Ser Gln Asp Thr Xaa Phe Xaa Xaa Leu Val Glu Arg Val
                                     10
Ile Gln Gln Leu Glu Gly Ala Phe Ala Leu Xaa Phe Lys Ser Val His
             20
                                                      30
Phe Pro Gly Gln Ala Xaa Gly Thr Arg Arg Gly Ser Pro Leu Leu Ile
Gly Val Arg Ser Glu His Lys Leu Ser Thr Asp His Ile Pro Ile Leu
    50
                        55
                                             60
Tyr Arg Thr Gly Lys Asp Lys Lys Gly Ser Cys Asn Leu Ser Arg Val
65
                                         75
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<220> <221> SITE

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Asp Ser Thr Thr Cys Leu Xaa Pro Xaa Glu Glu Lys Ala Xaa Glu Tyr
                  85
Tyr Phe Ala Ser Asp Ala Xaa Ala Ala
             100
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1585

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Xaa Pro Xaa Val Gln Xaa Leu Gln Ala Tyr Lys Pro Arg Glu Asn Asp
                                 25
Xaa Leu Ala Leu Glu Lys Ala Asp Val Val Met Val Thr His Gln Ser
         35
Ser Ala Arg Leu Ala Gly Gly Arg Glu Ala Leu Arg Arg Gly Ala Arg
Leu Val Ser Cys Asp Ser Xaa Xaa Ser Ser Phe Pro Thr Gln Arg Ser
 65
                    70
                                        75
Val Thr Gln Asn Leu Lys Gly Ser Phe Ile Glu Cys Lys Thr Cys Gln
Thr Thr Ala Xaa Gly Asn Ser Lys Pro Xaa Phe Ser Xaa Xaa Glu Gly
Val Phe Val Ser Trp Lys Asn Lys Leu
      115
                           120
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<210> 1518

<211> 146

<212> PRT

<213> Homo sapiens

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Arg Gly Pro Ala Gln Arg Gly Glu Gly Ala Arg Glu Ala Asn Lys Lys
Ile Glu Lys Gln Leu Gln Lys Asp Lys Gln Val Tyr Arg Ala Thr His
Arg Leu Leu Leu Gly Ala Gly Glu Ser Gly Lys Ser Thr Ile Val
Lys Gln Met Arg Ile Leu His Val Asn Gly Phe Asn Gly Asp Ser Glu
                        55
Lys Ala Thr Lys Val Gln Xaa Ile Lys Asn Asn Leu Lys Glu Ala Ile
65
Glu Thr Ile Val Ala Ala Met Ser Asn Leu Val Pro Pro Val Glu Leu
Ala Asn Pro Glu Asn Gln Phe Arg Val Asp Tyr Ile Leu Ser Val Met
           100
Asn Val Pro Asp Phe Xaa Phe Pro Pro Glu Phe Tyr Glu His Ala Lys
                            120
Ala Leu Trp Xaa Asp Glu Xaa Val Arg Xaa Cys Tyr Glu Arg Ser Asn
                        135
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Glu Tyr
145
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<210> 1519
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<213> Homo sapiens

<220> <221> SITE

<222> (72)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 1519

Asp Ser Gln Arg Gln Ala Thr Lys Asp Ala Gly Val Ile Ala Gly Leu  $\hat{1}$  5 10 15

Asn Val Leu Arg Ile Ile Asn Glu Pro Thr Ala Ala Ala Ile Ala Tyr 20 25 30

Gly Leu Asp Arg Thr Gly Lys Gly Glu Arg Asn Val Leu Ile Phe Asp  $35 \hspace{1cm} 40 \hspace{1cm} 45$ 

Leu Gly Gly Gly Thr Phe Asp Val Ser Ile Leu Thr Ile Asp Asp Gly 50 55 60

Ile Phe Glu Val Lys Ala Thr Xaa Gly Asp Thr His Leu Gly Gly Glu 65 70 75 80

Asp Phe Asp Asn Arg Leu Val Asn His Phe Val Glu Glu Phe Lys Arg 85 90 95

Lys His Lys Lys Asp Ile Ser Gln Asn Lys Arg Ala Val Arg Arg Leu 100 105 110

Arg Thr Ala Ala Arg Gly Pro Arg Gly Pro Cys Arg Pro Ala Pro Arg 115 120 125

Pro Ala Trp Arg Ser Thr Ser Leu Phe 130 135

<210> 1520

<211> 100

<212> PRT

<213> Homo sapiens

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<220>
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 <222> (16)
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<220>
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<400> 1520
Cys Arg Lys Ser Ser Trp Lys Arg Trp Trp Pro Gln Ser Lys Leu Xaa
Thr Arg Xaa Ile Val Thr Ile Gly Ile Lys Ala Met Ala Thr Met Asp
             20
                                  25
Ile Thr Ala Lys Val Thr Val Val Met Glu Asp Met Xaa Tyr Thr Gly
Tyr Asn Asn Tyr Tyr Gly Tyr Gly Asp Tyr Ser Asn Gln Gln Ser Gly
                         55
Tyr Gly Lys Val Ser Arg Arg Gly Gly His Gln Asn Ser Tyr Lys Pro
 65
                     70
Tyr Leu Asn Tyr Ser Ile Cys Asn Leu Ser Pro Thr Gly Gly Glu Ala
                                     90
Tyr Phe Xaa Ile
            100
<210> 1521
<211> 129
<212> PRT
<213> Homo sapiens
<220>
<221> SITE
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Val

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<222> (72)
  <223> Xaa equals any of the naturally occurring L-amino acids
  <220>
  <221> SITE
  <222> (95)
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 <220>
 <221> SITE
 <222> (123)
 <223> Xaa equals any of the naturally occurring L-amino acids
 <400> 1521
 Asp Ala Trp Ala Leu Ala Pro Gly Pro Val Leu Phe Ser Asn Met Val
Cys Leu Lys Phe Pro Gly Ser Ser Cys Met Ala Ala Leu Thr Val Thr
                                  25
Leu Met Val Leu Asn Ser Pro Leu Ala Leu Ala Gly Asp Thr Arg Pro
Arg Phe Leu Glu Gln Val Lys His Glu Cys His Phe Phe Asn Gly Thr
     50
Glu Arg Val Arg Phe Leu Asp Xaa Tyr Phe Tyr His Gln Glu Glu Tyr
Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Xaa Leu
                                     90
Gly Arg Pro Asn Ser Glu Tyr Trp Asn Ser Gln Lys Asp Xaa Xaa Asp
            100
Arg Ser Gly Pro Arg Trp Thr Pro Thr Ala Xaa Thr Leu Arg Gly Trp
        115
                            120
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WO 00/55350

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<210> 1522
 <211> 113
 <212> PRT
<213> Homo sapiens
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<220>
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Xaa Xaa Thr Asp Ser Xaa Arg Pro Asp Ser Arg Val Asp Pro Arg Val
Arg Glu Val Thr Asp Tyr Ala Ile Ala Arg Arg Ile Val Asp Leu His
             20
                                 25
Ser Arg Ile Glu Glu Ser Ile Xaa Asn Ile Tyr Xaa Leu Asp Asp Ile
Arg Arg Tyr Leu Xaa Tyr Ala Arg Lys Xaa Lys Pro Lys Asn Ser Lys
                         55
Xaa Ser Xaa Asp Phe Ile Val Glu Gln Xaa Lys His Leu Arg Pro Xaa
65
                     70
Asp Gly Phe Trp Ser Ser Pro Val Phe Xaa Glu Gly Xaa Ser Cys Gly
                                     90
Xaa Ile Glu Gly Leu Gly Ser Val Ser Leu Gly Ser Gln Xaa Leu Arg
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1592

100 105 110

Val

<210> 1523

<211> 32

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (16)

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<220>

<221> SITE

<222> (31)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 1523

Pro Cys Lys Gly Ser Ile Ile Thr Trp Ser Leu Ile Arg Asp Leu Xaa 1 5 10 15

Glu Trp Leu His Glu Gly Gln Leu Ala Leu Thr Phe Asn Gln Xaa Asn 20 25 30

<210> 1524

<211> 28

<212> PRT

<213> Homo sapiens

<400> 1524

Pro Cys Lys Gly Ser Ile Ile Thr Cys Ser Leu Asn Arg Asp Leu Tyr  $1 \hspace{1.5cm} 5 \hspace{1.5cm} 10 \hspace{1.5cm} 15$ 

Glu Trp Leu His Glu Gly Ser Ala Val Ser Tyr Phe 20 25

<210> 1525

<211> 92

<212> PRT

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<213> Homo sapiens
  <220>
  <221> SITE
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  <221> SITE
  <222> (6)
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<223> Xaa equals any of the naturally occurring L-amino acids
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<222> (92)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 1525
Xaa Glu Gln Lys Leu Xaa Leu His Arg Gly Gly Gly Arg Ser Arg Thr
                 5
                                     10
                                                         15
```

Ser Gly Ser Pro Xaa Leu Xaa Glu Phe Gly Thr Ser Gly Thr Arg Pro 20 25 30

Cys Gly Val Tyr Thr Pro Arg Cys Gly Ser Gly Leu Leu Cys Tyr Pro 35 40 45

Pro Arg Gly Val Glu Lys Pro Leu His Thr Leu Met His Gly Gln Gly 50 60

Val Cys Met Glu Leu Ala Xaa Ile Glu Ala Xaa Xaa Glu Ser Leu Xaa 65 70 75 80

Pro Ser Asp Lys Asp Glu Gly Asp His Pro Asn Xaa 85 90

<210> 1526

<211> 154

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (1)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (118)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 1526

Xaa Glu Pro Ser Pro Gly Ile Phe Arg Trp Phe His Leu Val Asn Arg  $1 \hspace{1.5cm} 5 \hspace{1.5cm} 10 \hspace{1.5cm} 15$ 

Thr Glu Gln Arg Glu Leu Thr Met Glu Phe Gly Leu Ser Trp Leu Phe 20 25 30

Leu Val Ala Ile Leu Lys Gly Val Gln Cys Glu Val Gln Leu Val Glu 35 40 45

Ser Gly Gly Leu Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys 50 60

Thr Val Ser Gly Phe Thr Phe Arg Asn Tyr Ala Met Ser Trp Val Arg 65 70 75 80

Gln Gly Pro Gly Lys Gly Leu Glu Trp Val Ser Ala Ile Asp Gly Ser 85 90 95

1595

Gly Tyr Asn Thr Tyr Tyr Glu Arg Ser Leu Gln Gly Arg Phe Ser Val 105 110 Ser Arg Asp Asn Ser Xaa Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu 120 Gly Ala Glu Asp Thr Ala Ile Tyr Tyr Cys Ala Lys Thr Glu Arg Met 135 Gly Thr Gly Trp Tyr Gly Arg Asn Asp Tyr 145 <210> 1527 <211> 135 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (95) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (129) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (133) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (134) <223> Xaa equals any of the naturally occurring L-amino acids Gly Lys Leu Val Arg Leu Gln Val Pro Val Arg Asn Ser Arg Val Asp 10 Pro Arg Val Arg Thr Val Thr Pro Gly Glu Thr Ala Ser Ile Ser Cys 25 Arg Ser Ser Gln Thr Leu Leu His Val Asn Gly His Asn Tyr Leu Asp 35 45 Trp Tyr Met Gln Lys Pro Gly Gln Pro Pro Gln Leu Val Val Tyr Arg 50 55 60

Gly Ser Asn Arg Ala Ser Gly Val Pro Asp Arg Phe Ser Gly Gly Gly 70 Ser Gly Thr Asp Phe Thr Leu Arg Ile Thr Thr Val Glu Ala Xaa Asp 85 Val Gly Val Tyr Tyr Cys Met Gln Ala Leu Gln Ser Pro Tyr Thr Phe 100 105 Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg Thr Val Gly Cys Thr Ile 120 Xaa Leu His Leu Xaa Xaa Ile 130 135 <210> 1528 <211> 139 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (117) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (137) <223> Xaa equals any of the naturally occurring L-amino acids <400> 1528

Ser Gly Ser Pro Gly Leu Gln Glu Phe Gly Thr Ser Gly Trp Ala Leu

Arg Glu Gln Lys Leu Glu Leu His Arg Gly Gly Arg Ser Arg Thr

Arg Ile Ser Arg Phe Leu Pro Gly Phe His Ser Phe Ala Pro Cys Thr 35 40 45

Val Ala Pro Ser Leu Arg Ala Gln Pro Ala Lys Gln Arg Ala Pro Val 50 55 60

Ala Gly Val Met Gln Arg Ala Arg Pro Thr Leu Trp Ala Ala Ala Leu 65 70 75 80

Thr Leu Leu Val Leu Leu Arg Gly Pro Pro Val Ala Arg Ala Gly Ala 85 90 95

1597

Ser Ser Gly Gly Leu Gly Pro Val Val Arg Cys Glu Pro Cys Asp Ala

Arg Ala Leu Ala Xaa Cys Ala Pro Ser Ala Arg Arg Val Arg Arg Asn 115 120 125

Leu Val Arg Gln Ala Gly Leu Ala Xaa Ala Ala 130 135

<210> 1529

<211> 135

<212> PRT

<213> Homo sapiens

<400> 1529

Trp Ile Pro Arg Ala Ala Gly Ile Arg His Glu Ile Asp Asp Thr Asn 1  $\phantom{\bigg|}$  10  $\phantom{\bigg|}$  15

Ile Thr Arg Leu Gl<br/>n Leu Glu Thr Glu Ile Glu Ala Leu Lys Glu Glu 20 25 30

Leu Leu Phe Met Lys Lys Asn His Glu Glu Glu Val Lys Gly Leu Gln  $35 \hspace{1cm} 40 \hspace{1cm} 45$ 

Ala Gln Ile Ala Ser Ser Gly Leu Thr Val Glu Val Asp Ala Pro Lys
50 55 60

Ser Gln Asp Leu Ala Lys Ile Met Ala Asp Ile Arg Ala Gln Tyr Asp 65 70 75 80

Glu Leu Ala Arg Lys Asn Arg Glu Glu Leu Asp Lys Tyr Trp Ser Gln  $85 \hspace{1cm} 90 \hspace{1cm} 95$ 

Gln Ile Glu Ser Thr Thr Val Val Thr Thr Gln Ser Ala Glu Val 100 105 110

Gly Ala Ala Glu Thr Thr Leu Thr Glu Leu Arg Arg Thr Val Gln Ser 115 120 125

Leu Glu Ile Asp Leu Gly Leu 130 135

<210> 1530

<211> 132

<212> PRT

<213> Homo sapiens

<400> 1530 Trp Ile Pro Arg Ala Ala Gly Ile Arg His Glu Gln Val Pro Ala Arg Lys Lys Arg Pro Lys Arg Leu Arg Thr Gly Asn Met Val Arg Ser Gly 25 Asn Lys Ala Ala Val Val Leu Cys Met Asp Val Gly Phe Thr Met Ser 40 Asn Ser Ile Pro Gly Ile Glu Ser Pro Phe Glu Gln Ala Lys Lys Val Ile Thr Met Phe Val Gln Arg Gln Val Phe Ala Glu Asn Lys Asp Glu Ile Ala Leu Val Leu Phe Gly Thr Asp Gly Thr Asp Asn Pro Leu Ser 85 90 Gly Gly Asp Gln Tyr Gln Asn Ile Thr Val His Arg His Leu Met Leu 105 Pro Asp Phe Asp Leu Leu Glu Asp Ile Glu Lys Gln Asn Pro Thr Arg 120 Phe Ser Thr Gly 130 <210> 1531 <211> 94 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (18) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (27) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (34)

<223> Xaa equals any of the naturally occurring L-amino acids

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<220>
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<222> (61)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (69)
<223> Xaa equals any of the naturally occurring L_{\pm}amino acids
<220>
<221> SITE
<222> (75)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (78)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (94)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 1531
Arg Lys Arg Leu Lys Gly Glu Glu Gln Lys Leu Leu Arg Asn Ala Arg
Arg Xaa Gln Lys Met Ala Cys Gln Met Thr Xaa Asn His Ser Ser Val
             20
                                25
Ser Xaa Leu Lys Gly Ser Ser Leu Gln Asp Arg Arg Ala Ser Arg Phe
Leu Ile Lys Ser Val Gln Lys Ser Ser Gly Val Gln Xaa Asp Pro Ser
                         55
Ser Ser Ile Ser Xaa Pro Ser Leu Thr Ala Xaa Trp Ser Xaa Leu Pro
65
                    70
Trp His Leu Arg Gly Pro Lys Ala Ala Lys Thr Leu Lys Xaa
                 85
                                     90
```

<210> 1532

<211> 153

<212> PRT

<213> Homo sapiens

20 25 30

Phe Pro Asn Gly Glu Thr Lys Tyr Ala Ser Glu Asn His Leu Ser Arg 35 40 45

Phe Val Trp Phe Phe Ser Gly Ile Val Gly Gly Gly Leu Leu Met Leu 50 55 60

Leu Pro Ala Phe Val Phe Ile Gly Leu Glu Gln Asp Asp Cys Cys Gly 65 70 75 80

Cys Cys Gly His Glu Asn Cys Gly Lys Arg Cys Ala Met Leu Ser Ser 85 90 95

Val Leu Ala Ala Leu Ile Gly Ile Ala Gly Ser Gly Tyr Cys Val Ile 100 105 110

Val Ala Ala Leu Gly Leu Ala Glu Gly Pro Leu Cys Leu Asp Ser Leu 115 120 125

Gly Gln Trp Asn Tyr Thr Phe Ala Ser Thr Glu Gly Gln Val Pro Ser 130 135 140

Gly Tyr Leu His Met Val Arg Val His 145 150

<210> 1533

<211> 142

<212> PRT

<213> Homo sapiens

<400> 1533

Leu Cys Leu Leu Arg Thr Thr Val Thr Glu Val Ser Arg Ala Phe Ser 1 5 10 15

Leu Leu Cys Lys Met Ala Thr Leu Lys Glu Lys Leu Ile Ala Pro Val $20 \hspace{1.5cm} \textbf{25} \hspace{1.5cm} \textbf{30}$ 

Ala Glu Glu Glu Ala Thr Val Pro Asn Asn Lys Ile Thr Val Val Gly
35 40 45

Val Gly Gln Val Gly Met Ala Cys Ala Ile Ser Ile Leu Gly Lys Ser 50 60

```
Leu Ala Asp Glu Leu Ala Leu Val Asp Val Leu Glu Asp Lys Leu Lys
                     70
                                        75
 Gly Glu Met Met Asp Leu Gln His Gly Ser Leu Phe Leu Gln Thr Pro
 Lys Ile Leu Ala Asp Lys Asp Tyr Ser Val Thr Ala Asn Ser Lys Ile
            100
                                105
 Val Val Thr Ala Gly Val Arg Gln Gln Glu Gly Glu Ser Arg Leu
                           120
Asn Leu Val Gln Arg Asn Val Asn Val Phe Lys Phe Ile Ile
                      135
<210> 1534
<211> 67
<212> PRT
<213> Homo sapiens
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<220>
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<223> Xaa equals any of the naturally occurring L-amino acids
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<221> SITE
<222> (54)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (61)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 1534
Ala His Cys His Ala Pro Pro Thr Thr Ala Arg Arg Ala Phe Pro Ile
Pro Phe Gly Ser Lys Ser Asn Met Ala Thr Leu Lys Asp Gln Leu Ile
            20
Tyr Asn Leu Leu Lys Glu Glu Gln Thr Xaa Gln Asn Lys Ile Thr Xaa
                           40
```

```
Val Gly Val Gly Ala Xaa Gly Met Ala Cys Ala Ile Xaa Ile Leu Met
 Lys Asp Leu
 65
<210> 1535
<211> 72
<212> PRT
<213> Homo sapiens
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<400> 1535
Xaa Lys Lys Tyr Leu Gly Asp Xaa Ile Glu Gly Thr Pro Ala Gly Thr
                                     10
Gly Pro Glu Phe Pro Gly Leu Leu Thr Cys Leu Leu Gln Leu Ile Met
             20
Val Thr Asn Lys Ala Ile Ala Ser Gln Ile Ser Gln Ile Lys His Phe
Phe His Cys Ile Leu Val Val Val Cys Pro Asn Ser Ser Met Tyr Leu
     50
                         55
                                             60
Ile Met Ser Gly Ser Ile Leu His
                     70
<210> 1536
<211> 80
<212> PRT
<213> Homo sapiens
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<223> Xaa equals any of the naturally occurring L-amino acids
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<210> 1537

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<222> (50)
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<220>
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                                      0 1 14 5 4 1 4 4 1 . . .
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<400> 1536
Gly Lys Ala Trp Gly Ser Glu Cys Glu Lys Cys Pro Leu Pro Gly Thr
Glu Ala Phe Xaa Glu Ile Cys Pro Ala Gly His Gly Tyr Thr Tyr Ala
                                 25
Ser Ser Asp Ile Arg Leu Ser Met Arg Lys Ala Glu Xaa Glu Glu Leu
Ala Xaa Pro Pro Arg Glu Gln Gly Gln Xaa Ser Ser Trp Ala Leu Pro
    50
Gly Pro Thr Xaa Lys Gln Pro Leu Arg Val Arg His Gly His Leu Ala
65
                     70
```

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<211> 137
<212> PRT
<213> Homo sapiens
<220>
<221> SITE
<222> (58)
<223> Xaa equals any of the naturally occurring L-amino acids
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<222> (74)
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<222> (122)
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<223> Xaa equals any of the naturally occurring L-amino acids
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<222> (137)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 1537
Arg Lys Gln Cys Gln Asp Ser Lys Asp Ser Asn His Leu Pro Lys Met
                                     10
Ser Leu Ser Ala Phe Thr Leu Phe Leu Ala Leu Ile Gly Gly Thr Ser
                                 25
Gly Gln Tyr Tyr Asp Tyr Asp Phe Pro Leu Ser Ile Tyr Gly Gln Ser
Ser Pro Asn Cys Ala Pro Glu Cys Asn Xaa Pro Glu Ser Tyr Pro Ser
                         55
Ala Met Tyr Cys Asp Glu Leu Lys Leu Xaa Ser Val Pro Met Val Pro
65
                     70
                                         75
Pro Gly Ile Lys Tyr Leu Tyr Leu Arg Asn Asn Gln Ile Asp His Ile
                                     90
Asp Glu Lys Ala Phe Glu Asn Val Thr Asp Leu Gln Trp Leu Ile Leu
                                105
Asp His Asn Leu Leu Glu Asn Ser Lys Xaa Lys Gly Arg Val Phe Ser
        115
                           120
```

```
Lys Leu Lys Gln Leu Xaa Lys Xaa Xaa
130 135
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<210> 1538
 <211> 144
 <212> PRT
 <213> Homo sapiens
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 <222> (134)
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 <220>
 <221> SITE
 <222> (137)
<223> Xaa equals any of the naturally occurring L-amino acids
 <400> 1538
Tyr Gln Val Tyr Ser Lys Ile Gln Ala Thr Asn Thr Trp Leu Phe Leu
  15
Ser Ser Cys Asn Gly Asn Glu Thr Ser Leu Trp Asp Cys Lys Asn Trp
                                25
Gln Trp Gly Gly Leu Thr Cys Asp His Tyr Glu Glu Ala Lys Ile Thr
                            40
Cys Ser Ala His Arg Glu Pro Arg Leu Val Gly Gly Asp Ile Pro Cys
Ser Gly Arg Val Glu Val Lys His Gly Asp Thr Trp Gly Ser Ile Cys
 65
                    70
Asp Ser Asp Phe Ser Leu Glu Ala Ala Ser Val Leu Cys Arg Glu Leu
Gln Cys Gly Thr Val Val Ser Ile Leu Gly Gly Ala His Phe Gly Glu
                              105
Gly Met Asp Arg Ser Gly Leu Lys Asn Ser Ser Val Glu Gly His Glu
       115
                         120
Ser Pro Ser Phe Ile Xaa Pro Val Xaa Thr Pro Pro Lys Arg Asn Leu
```

135

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<210> 1539
<211> 85
<212> PRT
<213> Homo sapiens
<220>
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<222> (35)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 1539
Asn Met Ala Gly Val Glu Val Ala Ala Ser Gly Ser His Leu Asn
                                    10
Gly Asp Leu Asp Pro Asp Asp Arg Glu Glu Gly Ala Ala Ser Thr Ala
Glu Glu Xaa Ala Lys Lys Lys Arg Arg Lys Lys Lys Ser Lys Gly
Pro Ser Ala Gly Lys Glu Ser Phe Met Phe Ser Gln Ser Pro Pro Gly
                         55
Thr Ala Glu Leu Phe Gly Ser Gly Pro Leu Arg Gly Pro Gly Pro Gly
                    70
                                        75
Pro Gln Ser Pro Asp
<210> 1540
<211> 36
<212> PRT
<213> Homo sapiens
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<222> (9)
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<220>
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<223> Xaa equals any of the naturally occurring L-amino acids
<220>
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<222> (22)
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 <220>
 <221> SITE
 <222> (27)
 <223> Xaa equals any of the naturally occurring L-amino acids
 <400> 1540
 Gly Val Gly Phe Arg Glu Gly Thr Xaa Gly Ala Gln Thr Gln Arg Ile
                  5 . .
                                - 10
 Arg Xaa Arg Val Pro Xaa Asn Trp Lys Met Xaa Phe Glu Pro Ile Ser
 Ser Thr Lys Phe
         35
 <210> 1541
 <211> 144
 <212> PRT
<213> Homo sapiens
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<222> (19)
<223> Xaa equals any of the naturally occurring L-amino acids
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<222> (21)
<223> Xaa equals any of the naturally occurring L-amino acids
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<222> (107)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
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<222> (123)
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<220>
<221> SITE
<222> (131)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (132)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (143)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 1541
Arg Thr Xaa Ala Xaa Gly Glu Arg Ala Cys Arg Ser Thr Leu Val Asp
Pro Lys Xaa Val Xaa Thr Val Phe Ser Leu Gly Ala Cys Met Glu Gly
             20
Leu Asn Ile Leu Leu Asn Arg Leu Leu Gly Ile Ser Leu Tyr Ala Glu
Gln Pro Ala Lys Gly Glu Val Trp Ser Glu Asp Val Arg Lys Leu Ala
     50
Val Val His Glu Ser Glu Gly Leu Leu Gly Tyr Ile Tyr Cys Asp Phe
Phe Gln Arg Ala Asp Lys Pro His Gln Asp Cys His Phe Thr Ile Arg
                                    90
Gly Gly Arg Leu Lys Gly Arg Trp Glu Thr Xaa Gln Leu Pro Val Val
            100
Ser Ser Tyr Ala Gly Ile Phe Pro Val Pro Xaa Arg Glu Phe Ser Asn
                            120
Phe Gly Xaa Xaa Leu Gly Met Met Gly Lys Pro Phe Pro Gly Xaa Gly
   130
```

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<210> 1542
 <211> 145
 <212> PRT
 <213> Homo sapiens
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 Ala Glu Arg Thr Pro Cys Arg Arg Pro Ala Glu Met Leu Arg Leu Pro
                 5
 Thr Val Phe Arg Gln Met Arg Pro Val Ser Arg Val Leu Ala Pro His
                                 2.5
Leu Thr Arg Ala Tyr Ala Lys Xaa Val Lys Phe Gly Ala Asp Ala Arg
 Ala Leu Met Leu Gln Gly Val Asp Leu Leu Ala Asp Ala Val Ala Val
                         55
Thr Met Gly Pro Lys Gly Arg Thr Val Ile Ile Glu Gln Ser Trp Gly
                     70
                                         75
Ser Pro Lys Val Thr Lys Asp Gly Val Thr Val Ala Lys Ser Ile Asp
Leu Lys Asp Lys Tyr Lys Asn Ile Gly Ala Lys Leu Val Gln Asp Val
            100
                                105
Ala Asn Asn Thr Asn Glu Glu Ala Gly Asp Gly Thr Thr Thr Ala Thr
Val Leu Ala Arg Ser Ile Ala Lys Glu Gly Phe Glu Lys Ile Ser Lys
                       135
Gly
145
<210> 1543
<211> 135
<212> PRT
<213> Homo sapiens
<400> 1543
Lys Phe Gly Ala Asp Ala Arg Ala Leu Met Leu Gln Gly Val Asp Leu
```

Leu Ala Asp Ala Val Ala Val Thr Met Gly Pro Lys Gly Arg Thr Val \$20\$ \$25\$

Ile Ile Glu Gln Ser Trp Gly Ser Pro Lys Val Thr Lys Asp Gly Val 35 40 45

Thr Val Ala Lys Ser Ile Asp Leu Lys Asp Lys Tyr Lys Asn Ile Gly 50 55 60

Ala Lys Leu Val Gln Asp Val Ala Asn Asn Thr Asn Glu Glu Ala Gly 65 70 75 80

Asp Gly Thr Thr Thr Ala Thr Val Leu Ala Arg Ser Ile Ala Lys Glu 85 90 95

Gly Phe Glu Lys Ile Ser Lys Gly Ala Asn Pro Val Glu Ile Arg Arg 100 105 110

Gly Val Met Leu Ala Val Asp Ala Val Ile Ala Glu Leu Lys Lys Gln 115 120 125

Ser Lys Pro Val Thr Thr Pro 130 135

<210> 1544

<211> 84

<212> PRT

<213> Homo sapiens

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<220>

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<220>

<221> SITE

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<223> Xaa equals any of the naturally occurring L-amino acids

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<400> 1544
 Cys Glu Phe Lys Arg Val Pro Gln Cys Pro Ser Gly Arg Val Tyr Val
                                    10
 Leu Lys Phe Lys Ala Gly Ser Lys Arg Leu Phe Phe Trp Met Gln Glu
                                25
 Pro Lys Thr Asp Gln Asp Glu Glu His Cys Arg Lys Val Asn Glu Leu
         35 40 45
 Ser Gly Thr Thr Pro Arg Cys Leu Gly His Trp Gly Pro Ala Glu Gln
 Arg Pro Arg Xaa Leu Cys Ala Xaa Arg Leu Arg Trp Xaa Ala Glu Xaa
                                     75 .
 Ala Gly Glu Thr
<210> 1545
<211> 22
<212> PRT
<213> Homo sapiens
<400> 1545
Tyr Leu Arg Leu Ile Tyr Ser Thr Ser Ile Thr Leu Leu Pro Ile Ser
                                   10
Asn Asn Val Lys Ile Lys
            20
<210> 1546
<211> 112
<212> PRT
<213> Homo sapiens
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<222> (82)
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<223> Xaa equals any of the naturally occurring L-amino acids
<220>
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Pro Ser Ala Ala Ala Gly Asp Leu Gln Arg Thr Ala Ala Met Gly Ala
                                     10
His Leu Val Arg Arg Tyr Leu Gly Asp Ala Ser Val Xaa Pro Asp Pro
                                 25
Leu Gln Met Pro Thr Phe Pro Pro Asp Tyr Gly Phe Pro Glu Arg Lys
                                                 45
Xaa Arg Xaa Met Val Ala Thr Xaa Xaa Xaa Met Met Asp Ala His Xaa
                         55
Ser Ser Xaa Cys Gly Xaa Thr Ala Pro Thr Asn Ser Ser Gly Cys Ser
                     70
Ile Xaa Thr Leu Xaa Leu Pro Pro Leu Pro Trp Leu Ala Asn Gln Glu
                                     90
Arg Asp Lys Xaa Glu Xaa Xaa Gln Thr Pro Xaa Xaa Phe Xaa Xaa Pro
            100
                              105
                                                    110
```

<220>

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<210> 1547
<211> 142
<212> PRT
<213> Homo sapiens
<400> 1547
Lys Val Ser Ala Val Met Ala Phe Leu Ala Ser Gly Pro Tyr Leu Thr
His Gln Gln Lys Val Leu Arg Leu Tyr Lys Arg Ala Leu Arg His Leu
                                 25
Glu Ser Trp Cys Val Gln Arg Asp Lys Tyr Arg Tyr Phe Ala Cys Leu
         35
                             40
Met Arg Ala Arg Phe Glu Glu His Lys Asn Glu Lys Asp Met Ala Lys
Ala Thr Gln Leu Leu Lys Glu Ala Glu Glu Glu Phe Trp Tyr Arg Gln
                    70
                                        75
His Pro Gln Pro Tyr Ile Phe Pro Asp Ser Pro Gly Gly Thr Ser Tyr
                 85
                                    90
Glu Arg Tyr Asp Cys Tyr Lys Val Pro Glu Trp Cys Leu Asp Asp Trp
                                105
His Pro Ser Glu Lys Ala Met Tyr Pro Asp Tyr Phe Ala Lys Arg Glu
Gln Trp Lys Lys Leu Arg Glu Gly Lys Leu Gly Thr Arg Gly
    130
                       135
<210> 1548
<211> 98
<212> PRT
<213> Homo sapiens
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<222> (4)
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<223> Xaa equals any of the naturally occurring L-amino acids

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 <222> (9)
 <223> Xaa equals any of the naturally occurring L-amino acids
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 <222> (11)
 <223> Xaa equals any of the naturally occurring L-amino acids
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 <222> (12)
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 <222> (22)
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<222> (62)
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<221> SITE
<222> (65)
<223> Xaa equals any of the naturally occurring L-amino acids
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<221> SITE
<222> (66)
<223> Xaa equals any of the naturally occurring L-amino acids
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<221> SITE
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<222> (82)
<223> Xaa equals any of the naturally occurring L-amino acids
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<222> (95)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (97)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 1548
Leu Tyr Tyr Xaa Leu Gly Phe Leu Xaa Leu Xaa Xaa Arg Leu Pro Leu
                                     3.0
Asp Ala Ala Lys Arg Xaa His Asp Glu Leu Gly Asn Glu Arg Pro Xaa
Ala Tyr Met Xaa Glu His Asn Gln Leu Asn Gly Trp Xaa Ser Asp Glu
         35
Asn Asp Trp Asn Glu Lys Leu Tyr Pro Val Trp Lys Arg Xaa Asp Met
                         55
Xaa Xaa Glu Lys Leu Leu Glu Gly Arg Pro Val Cys Lys Ala Val Leu
                     70
Thr Xaa Asp Xaa Pro Thr Leu Gly Gly Leu Lys Xaa Asn Ile Xaa Arg
                85
                                     90
```

Xaa Thr

<sup>&</sup>lt;210> 1549 <211> 138 <212> PRT <213> Homo sapiens

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<220>
 <221> SITE
 <222> (60)
 <223> Xaa equals any of the naturally occurring L-amino acids
 <220>
 <221> SITE
 <222> (72)
 <223> Xaa equals any of the naturally occurring L-amino acids
                             of a least a party of the second and
 <220>
 <221> SITE
 <222> (73)
<223> Xaa equals any of the naturally occurring L-amino acids
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<222> (128)
<223> Xaa equals any of the naturally occurring L-amino acids
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<222> (136)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 1549
Gly Cys Ser Leu Glu Gln Arg Ser Phe Ile Ser Val Arg Leu Leu Ser
 1
                         10
Tyr Leu Ser Ala Cys Arg His Pro Met Glu Asp Ser Met Asp Met Asp
            20
                                                  30
Met Ser Pro Leu Arg Pro Gln Asn Tyr Leu Phe Gly Cys Glu Leu Lys
                           40
Ala Asp Lys Asp Tyr His Phe Lys Val Asp Asn Xaa Glu Asn Glu His
    50
Gln Leu Ser Leu Arg Thr Val Xaa Xaa Gly Ala Gly Ala Lys Asp Glu
                   70
                                      75
```

<220>

Leu His Ile Val Glu Ala Glu Ala Met Asn Tyr Glu Gly Ser Pro Ile 85 90 Lys Val Thr Leu Ala Thr Leu Lys Met Ser Val Gln Pro Thr Val Phe 100 105 110 Pro Leu Gly Ala Leu Asn Asn Thr Thr Xaa Xaa Leu Lys Val Glu Xaa 125 115 120 Trp Phe Arg Ala Met Pro Ile Xaa Gly Gln 130 135 <210> 1550 <211> 51 <212> PRT <213> Homo sapiens <400> 1550 Thr Leu Ala Phe Phe Leu Ile Pro Cys Ile Gly Ser Pro Ala Cys Pro 5 10 Thr Met Ser Asp Ala Ala Val Asp Thr Ser Ser Glu Ile Thr Thr Lys 20 25 Asp Leu Lys Glu Lys Lys Glu Val Val Glu Glu Ala Glu Met Glu Glu 40 45 Thr Pro Cys 50 <210> 1551 <211> 73 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (3) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (6) <223> Xaa equals any of the naturally occurring L-amino acids

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<221> SITE
<222> (27)
<223> Xaa equals any of the naturally occurring L-amino acids
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<221> SITE
<222> (37)
<223> Xaa equals any of the naturally occurring L-amino acids
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<222> (63)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (67)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 1551
Lys Ala Xaa Ser Val Xaa Leu Tyr Lys Val Arg Leu Gln Val Pro Val
                            . 10
Arg Asn Ser Arg Val Asp Pro Arg Val Arg Xaa Gly Gly Glu Gln Val
            20 25
Ser Ser Thr Ile Xaa Gly Leu Ser Gly Pro Pro Ser Arg Arg Gly Pro
Phe Pro Leu Ala Trp Val Ile Leu Phe Leu Leu Glu Ala Gln Xaa Gly
                    5.5
Pro Trp Xaa Leu Leu Pro Ser Ala His
<210> 1552
<211> 131
<212> PRT
<213> Homo sapiens
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<223> Xaa equals any of the naturally occurring L-amino acids
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<222> (129)
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<400> 1552
Asn Ser Ala Xaa Xaa Glu Leu Leu Thr Gln Pro Gly Asp Trp Thr Leu
                  5
                                     10
Phe Val Pro Thr Asn Asp Ala Phe Lys Gly Met Thr Ser Glu Glu Lys
Glu Ile Leu Ile Arg Asp Lys Asn Ala Leu Gln Asn Ile Ile Leu Tyr
         35
                             40
His Leu His Gln Glu Phe Ser Leu Glu Lys Asp Leu Asn Leu Val Leu
Leu Thr Phe Leu Lys Thr Thr Gln Gly Ser Lys Ile Phe Leu Glu Gly
                     70
```

Ser Glu Met Val Thr Leu Leu Val Asn Gly Phe Gly Asn Pro Lys Xaa 90 Ser Asp Ile His Gly Pro Pro Xaa Val Val Ile Ser Cys Cys Arg Leu 100 105 Asn Xaa Xaa Phe Pro Ala Xaa Thr Pro Phe Gly Xaa Gly Ser Thr Gly 120 Xaa Asp Thr 130 <210> 1553 <211> 106 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (3) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (55) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (94) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (103) <223> Xaa equals any of the naturally occurring L-amino acids <400> 1553 Trp Ile Kaa Arg Ala Ala Gly Ile Arg His Glu Val Ala Asp Thr Met 10 Leu Pro Pro Met Ala Leu Pro Ser Val Ser Trp Met Leu Leu Ser Cys 20 25 Leu Met Leu Leu Ser Gln Val Gln Gly Glu Pro Gln Arg Glu Leu Pro Ser Ala Arg Ile Arg Xaa Pro Lys Gly Ser Lys Ala Tyr Gly Ser

1622

50 55 60

His Cys Tyr Ala Leu Phe Leu Ser Pro Lys Ser Trp Thr Asp Ala Asp 65 70 75 80

Leu Ala Cys Gln Lys Arg Pro Ser Gly Asn Leu Val Ser Xaa Leu Ser 85 90 95

<210> 1554

<211> 117

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (109)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 1554

Ala Thr Phe Pro Arg Glu Trp Leu Cys Asp Arg His Leu Arg Glu Lys

1 10 15

Met Phe Ser Ser Val Ala His Leu Ala Arg Ala Asn Pro Phe Asn Thr  $20 \hspace{1cm} 25 \hspace{1cm} 30$ 

Pro His Leu Gln Leu Val His Asp Gly Leu Gly Asp Leu Arg Ser Ser 35 40 45

Ser Pro Gly Pro Thr Gly Gln Pro Arg Arg Pro Arg Asn Leu Ala Ala 50 55 60

Ala Ala Val Glu Glu Gln Tyr Ser Cys Asp Tyr Gly Ser Gly Arg Phe 65 70 75 80

Phe Ile Leu Cys Gly Leu Gly Gly Ile Ile Ser Cys Gly Thr Thr His 85 90 95

Thr Ala Leu Val Pro Leu Asp Leu Val Lys Cys Arg Xaa Arg Phe Val

Phe Ala Cys Trp Thr 115

WO 00/55350

<211> 164

1623

PCT/US00/05882

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<212> PRT
 <213> Homo sapiens
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<222> (125)
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Glu Lys Lys Val Glu Arg Gln Thr Glu Leu Lys Arg Lys Phe Glu Gln
Met Lys Gln Asp Arg Ile Thr Arg Tyr Gln Gly Val Asn Leu Tyr Val
                                 25
Lys Asn Leu Asp Asp Gly Ile Asp Asp Glu Arg Leu Arg Lys Glu Phe
Ser Pro Phe Gly Thr Ile Thr Ser Ala Lys Val Met Met Glu Gly Gly
                         55
Arg Ser Lys Gly Phe Gly Phe Val Cys Phe Ser Ser Pro Glu Xaa Ala
 65
                    70
Thr Lys Ala Val Thr Xaa Met Asn Gly Arg Ile Val Ala Thr Lys Pro
Leu Tyr Val Ala Leu Ala Gln Arg Lys Glu Glu Arg Gln Ala His Leu
            100
                                105
Thr Asn Gln Tyr Met Gln Arg Met Ala Ser Val Arg Xaa Val Pro Asn
                            120
Pro Val Ile Asn Pro Tyr Gln Pro Ala Pro Pro Ser Gly Tyr Phe Met
    130
                        135
                                            140
Ala Ala Ile Pro Gln Thr Gln Asn Val Leu His Thr Ile Leu Leu Ala
145
                    150
                                        155
Lys Leu Leu Asn
```

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<210> 1556
 <211> 166
 <212> PRT
 <213> Homo sapiens
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<221> SITE
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<222> (150)
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Val Ala Ala Leu Ala Thr Ser Gly Ser Pro Gly Pro Val Arg Asn
                                 25
Ser Ala Arg Ala Gly Thr Ser Glu Phe Leu Asn Lys Val Thr Glu Ala
                             40
Gln Glu Asp Gly Gln Ser Thr Ser Glu Leu Ile Gly Gln Phe Gly Val
Gly Phe Tyr Ser Ala Phe Leu Val Ala Asp Lys Val Ile Val Thr Ser
 65
                     70
                                        75
Lys His Asn Asn Asp Thr Gln His Ile Trp Glu Ser Asp Ser Asn Glu
Phe Ser Val Ile Ala Asp Pro Arg Gly Asn Thr Leu Gly Arg Gly Thr
            100
                               105
Thr Ile Thr Leu Val Leu Lys Glu Glu Ala Ser Asp Tyr Leu Glu Leu
        115
Asp Thr Ile Lys Asn Leu Val Lys Lys Tyr Ser Gln Phe Ile Asn Phe
    130
                       135
Pro Ile Tyr Val Trp Xaa Ser Lys Thr Glu Thr Val Xaa Glu Pro Met
                                       155
Glu Glu Glu Gly Ala Ala
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<210> 1557 <211> 127

<212> PRT

<213> Homo sapiens

<220>

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<222> (1)
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<220>
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<400> 1557
Xaa Asn Val Val Glu Ala Gln Phe Asp Ser Arg Val Arg Ala Thr Gly
 1
          - 5
                                     10
His Ser Xaa Xaa Xaa Tyr Asn Lys Trp Glu Thr Ile Glu Ala Trp Thr.
Gln Gln Val Ala Thr Xaa Asn Pro Ala Leu Ile Ser Arg Ser Val Ile
                            40
Gly Thr Thr Phe Glu Gly Arg Ala Ile Tyr Leu Leu Lys Val Gly Lys
                         55
Ala Gly Gln Asn Lys Pro Ala Ile Phe Met Asp Cys Gly Phe Pro Met
Pro Xaa Xaa Trp Ile Ser Pro Cys Ile Xaa Pro Val Gly Phe Xaa Lys
                85
                                    90
                                                        95
```

Xaa Ala Val Pro Phe Leu Xaa Thr Phe Xaa Xaa Xaa Leu Thr Asn Phe 100 105 110

Xaa Asn Asn Leu Xaa Phe Tyr Xaa Pro Ala Leu Trp Pro Gln Tyr 115 120 125

<210> 1558

<211> 109

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (80)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (101)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (107)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (108)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 1558

Lys Ala Gly Ala Ala Ala Gly Gly Pro Gly Val Ser Gly Val Cys Val
1 5 10 15

Cys Lys Ser Arg Tyr Pro Val Cys Gly Ser Asp Gly Thr Thr Tyr Pro
20 25 30

Ser Gly Cys Gln Leu Arg Ala Ala Ser Gln Arg Ala Glu Ser Arg Gly 35 40 45

Glu Lys Ala Ile Thr Gln Val Ser Lys Gly Thr Cys Glu Gln Gly Pro . 50 55 60

Ser Ile Val Thr Pro Pro Lys Asp Ile Trp Asn Val Thr Gly Ala Xaa 65 70 75 80

Val Tyr Leu Ser Cys Glu Val Ile Gly Ile Pro Thr Pro Val Leu Ile

```
Trp Asn Lys Val Xaa Arg Gly His Tyr Gly Xaa Xaa Arg
```

<210> 1559

<211> 102

<212> PRT

<213> Homo sapiens

<400> 1559

Gly Leu Arg Gly His Leu Arg Ser Ser Gly Ser Ser Ile Trp Asn Tyr  $1 \hspace{1cm} 5 \hspace{1cm} 10 \hspace{1cm} 15$ 

Ile Lys Phe Arg Lys His Val Ser Arg Tyr Asp Ser Arg Thr Thr Ile 20 25 30

Phe Ser Pro Glu Gly Arg Leu Tyr Gln Val Glu Tyr Ala Met Glu Ala 35 40 45

Ile Gly His Ala Gly Thr Cys Leu Gly Ile Leu Ala Asn Asp Gly Val 50. 55 60

Leu Leu Ala Ala Glu Arg Arg Asn Ile His Lys Leu Leu Asp Glu Val 65 70 75 80

Phe Phe Ser Glu Lys Ile Tyr Lys Leu Asn Glu Asp Met Ala Cys Ser 85 90 95

Val Ala Gly Ile Thr Phe 100

<210> 1560

<211> 159

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (146)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 1560

Ser Thr His Ala Ser Ala Ala His Pro Ser Thr Leu Thr His Pro Gln
1 5 10 15

Arg Arg Ile Asp Thr Leu Asn Ser Asp Gly Tyr Thr Pro Glu Pro Asp
20 25 30

Lys Pro Arg Pro Met Pro Met Asp Thr Ser Val Tyr Glu Ser Pro Tyr
35 40 45

Ser Asp Pro Glu Glu Leu Lys Asp Lys Lys Leu Phe Leu Lys Arg Asp 50 55 60

Asn Leu Leu Ile Ala Asp Ile Glu Leu Gly Cys Gly Asn Phe Gly Ser 65 70 75 80

Val Arg Gln Gly Val Tyr Arg Met Arg Lys Lys Gln Ile Asp Val Ala 85 90 95

Ile Lys Val Leu Lys Gln Gly Thr Glu Lys Ala Asp Thr Glu Glu Met  $100 \hspace{1cm} 105 \hspace{1cm} 110$ 

Met Arg Glu Ala Gln Ile Met His Gln Leu Asp Asn Pro Tyr Ile Val 115 120 125

Arg Leu Ile Gly Val Cys Gln Ala Glu Ala Leu Met Leu Val Met Glu 130 135 140

Met Xaa Gly Ala Gly $\cdot$ Ala Ala Gln Val Pro Gly Arg Gln Glu Gly 145 150 155

<210> 1561

<211> 155

<212> PRT

<213> Homo sapiens

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<222> (139)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

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<223> Xaa equals any of the naturally occurring L-amino acids

<400> 1561

Arg Ala His Glu Asn Glu Ile Thr Lys Val Arg Lys Val Thr Phe Asn
1 5 10 15

Gly Leu Asn Gln Met Ile Val Ile Glu Leu Gly Thr Asn Pro Leu Lys 20 25 30

Ser Ser Gly Ile Glu Asn Gly Ala Phe Gln Gly Met Lys Lys Leu Ser 35 40 45

		,,,						55	•					6	0				y Leu
Pr 6	5	Pro	Se	r Le	eu T	hr G	1u 70	Leu	Hi.	s Le	eu A	sp	Gly 75	As	n Ly	/S	Ile	Se	r Arg 80
Va	1	Asp	Al	a Al	a S	er L 35	eu	Lys	Gl	y Le	u A	sn 90	Asn	Let	Al	.a :	Lys	Let 9	ı Gly
Le	u	Ser	Ph	e As	n Se O	er I	le	Ser	Ala	a Va 10	1 As 5	sp	Asn	Glý	Se		Leu 110	Ala	Asn
Th	r	Pro	Hi:	s Le	u Ar	g G	lu	Leu	His 120	Le	u As	ъp	Asn	Asn	Ly 12		Leu	Thi	Arg
Va.	1 1	Pro 130	Gly	/ G1	y Le	u G	Ln	Ser 135	Ile	Ly:	<b>s</b> Ту	r	Xaa	Xaa 140		y G	Sly	Tyr	Leu
Hi:	5 2	Asn	Asr	Hi:	s Il	e Se		Val	Val	Gly	y Se	r	Lys 155	•					io.
<210> 1562																			
<210> 1562 <211> 72																			
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<213> Homo sapiens																			
<22																			٤
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<223> Xaa equals any of the naturally occurring L-amino acids <400> 1562																			
			-	<b>3</b>	c		_		_										
					5						10	)	.eu I					15	
Ala	G.	ln I	ys	Lys 20	Gly	Se	r A	la 1	le	Asp 25	Arg	L	ys A	rg	His		s v	al	Leu
Gln	Tì	nr A	1 <b>a</b> 35	His	Pro	Sei	P	ro L	eu 40	Ser	Val	T	yr A	rg	Gly 45	Ph	e P	he	Gly
Суз	Ar 5	g H	is	Phe	Ser	Lys	T)	nr A	sn (	Glu	Leu	L		ln 1	Lys	Se	r G	ly 1	Lys
Lys 65	Pr	0 I	le	Asp	Trp	Lys 70		lu L	eu										

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Arg Thr Arg Gly Arg Leu Leu Gly His Leu Lys Glu Thr Trp Gly His
                  5
Pro Arg Arg Ala Ser Trp Val Val Arg Ser Arg Arg Cys Arg His Cys
Leu Cys Phe Met Arg Lys Met Leu Ala Ala Val Ser Arg Val Leu Ser
                            40
Gly Ala Ser Gln Lys Pro Ala Ser Arg Val Leu Val Ala Ser Arg Asn
     50
                       55 . . 60
Phe Ala Asn Asp Ala Thr Phe Glu Ile Xaa Lys Cys Asp Leu His Arg
                                        75
Leu Glu Glu Ala Leu Leu Ser Gln Gln Cys Ser Pro Arg Glu Asp Gly
                 85
                                   90
Leu Lys Tyr Tyr Arg Met Met Xaa Thr Val Pro Glu Trp Asn
            100
<210> 1564
<211> 95
<212> PRT
<213> Homo sapiens
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Leu His Ser Xaa Cys Thr Arg Arg Gly Ser Gly Ser Leu Arg Leu Cys
Ser Val Ala Arg Val Gly Gln Arg Arg Met Thr Ser Ala Ala Met Ser
Lys Pro His Ser Glu Xaa Gly Thr Ala Phe Ile Gln Thr Gln Xaa Leu
         35
                              40
His Ala Xaa Met Ala Asp Thr Phe Leu Glu His Met Xaa Arg Leu Asp
     50
                         55
                                              60
```

Ile Asp Ser Pro Pro Xaa Thr Gly Arg Asn Thr Gly Ile Ile Cys Thr 65 70 75 80

Ile Gly Pro Ala Ser Arg Ser Xaa Gly Asp Gly Xaa Gly Xaa Asp 85 90 95

<210> 1565

<211> 50

<212> PRT

<213> Homo sapiens

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<223> Xaa equals any of the naturally occurring L-amino acids

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<223> Xaa equals any of the naturally occurring L-amino acids

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<222> (49)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 1565

Pro Thr Met Ala Ala Ile Arg Lys Lys Leu Val Ile Val Gly Asp Gly
1 5 10 15

Ala Cys Gly Lys Thr Cys Leu Leu Ile Val Phe Ser Xaa Asp Gln Phe 20 25 30

Pro Glu Val Tyr Xaa Pro Thr Val Leu Xaa Glu Leu Tyr Cys Ala His 35 40 45

Xaa Gly

50

<210> 1566

<211> 161

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<212> PRT
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<221> SITE
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<223> Xaa equals any of the naturally occurring L-amino acids

<400> 1566

<222> (155)

Ala Ala Met Phe Asn Ile Arg Asn Ile Gly Lys Thr Leu Val Thr Arg  $1 \ 5 \ 10 \ 15$ 

Thr Gln Gly Thr Lys Ile Ala Ser Asp Gly Leu Lys Gly Arg Val Phe 20 25 30

Glu Val Ser Leu Ala Asp Leu Gln Asn Asp Glu Val Ala Phe Arg Lys  $35 \hspace{1cm} 40 \hspace{1cm} 45$ 

Phe Lys Leu Ile Thr Glu Asp Val Gln Gly Lys Asn Cys Leu Thr Asn 50 60

Phe His Gly Met Asp Leu Thr Arg Asp Lys Met Cys Ser Met Val Lys 65 70 75 80

Lys Trp Gln Thr Met Ile Glu Ala His Val Asp Val Lys Thr Thr Asp 85 90 95

Gly Tyr Leu Leu Arg Leu Phe Cys Val Gly Phe Thr Lys Lys Arg Asn 100 105 110

As n Gln Ile Arg Lys Thr Ser Tyr Ala Gln His Gln Gln Val Arg Gln 115 120 125

Ile Arg Lys Lys Met Met Glu Ile Met Thr Arg Glu Val Gln Thr Asn 130 135 140

Asp Leu Lys Glu Val Val Asn Lys Leu Ile Xaa Asp Ala Leu Glu Lys 145 150 155 160

Thr

<210> 1567 <211> 113 <212> PRT <213> Homo sapiens

<400> 1567

Pro Ser Leu Lys Gly Thr Lys Ala Gly Ala Pro Pro Arg Cys Gly Arg

1 15 10 Ser Arg Thr Ser Gly Ser Pro Gly Leu Gln Glu Phe Gly Thr Ser Pro 20 25 Gly Pro Arg Gln Ser Pro Ala Arg Leu Val Ala Met Pro Arg Lys Ile Glu Glu Ile Lys Asp Phe Leu Leu Thr Ala Arg Arg Lys Asp Ala Lys 55 Ser Val Lys Ile Lys Lys Asn Lys Asp Asn Val Lys Phe Lys Val Arg 70 Cys Ser Arg Tyr Leu Tyr Thr Leu Val Ile Thr Asp Lys Glu Lys Ala Glu Lys Leu Lys Gln Ser Leu Pro Pro Gly Leu Ala Val Lys Glu Leu 105 Lys <210> 1568 <211> 48 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (8) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (24) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (33) <223> Xaa equals any of the naturally occurring L-amino acids Gly Cys Asn Tyr Gly Lys Pro Xaa His His Gly Val Asn Gln Leu Lys Phe Ala Arg Ser Leu Gln Ser Xaa Ala Glu Glu Arg Ala Gly Arg His 25

Xaa Gly Ala Leu Arg Val Leu Asn Ser Tyr Trp Val Gly Glu Asp Ser 35 40 45

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<210> 1569
 <211> 120
 <212> PRT
 <213> Homo sapiens
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 <222> (103)
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 <220>
 <221> SITE
 <222> (106)
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 <400> 1569
Gly Thr Ser Glu Arg Xaa Glu His Ala Met Lys Ala Ser Gly Thr Leu
Arg Glu Tyr Lys Val Val Gly Arg Cys Leu Pro Thr Pro Lys Cys His
             20
                                  25
Thr Pro Pro Leu Tyr Arg Met Arg Ile Phe Ala Pro Asn His Val Val
Ala Lys Ser Arg Phe Trp Tyr Phe Val Ser Gln Leu Lys Lys Met Lys
Lys Ser Ser Gly Glu Ile Val Tyr Cys Gly Gln Val Phe Glu Lys Ser
                     70
Pro Leu Arg Val Lys Asn Phe Gly Ile Trp Leu Arg Tyr Asp Ser Arg
                                     90
Ser Gly Thr His Asn Met Xaa Arg Glu Xaa Arg Asp Leu Thr Asn Ala
```

105

100

```
Gly Ala Val Asn Gln Cys Asn Gly
         115
                           120
<210> 1570
<211> 85
<212> PRT
<213> Homo sapiens
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<222> (61)
<223> Xaa equals any of the naturally occurring L-amino acids
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<222> (78)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 1570
Cys Pro Pro Leu Trp Gln Glu Glu Val Trp Leu Asp Pro Asn Glu Thr
Asn Glu Ile Ala Asn Ala Asn Ser Arg Gln Gln Ile Arg Lys Leu Ile
             20
                                                     30
Lys Asp Gly Leu Ile Ile Arg Lys Pro Val Thr Val His Ser Arg Ala
         35 .
                             40
                                               45
Arg Cys Arg Lys Asn Thr Leu Ala Arg Arg Lys Gly Xaa His Met Gly
                         55
Ile Val Ser Gly Lys Val Gln Pro Met Pro Glu Cys Gln Xaa Arg Ser
                                        75
His Gly Leu Arg Lys
<210> 1571
<211> 135
<212> PRT
<213> Homo sapiens
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<221> SITE
<222> (134)
<223> Xaa equals any of the naturally occurring L-amino acids
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<220>
<221> SITE
<222> (13)

<220>

<400> 1571 Phe Ala Lys Met Thr Asn Thr Lys Gly Lys Arg Arg Gly Thr Arg Tyr Met Phe Ser Arg Pro Phe Arg Lys His Gly Val Val Pro Leu Ala Thr 20 25 Tyr Met Arg Ile Tyr Lys Lys Gly Asp Ile Val Asp Ile Lys Gly Met 40 Gly Thr Val Gln Lys Gly Met Pro His Lys Cys Tyr His Gly Lys Thr 50 Gly Arg Val Tyr Asn Val Thr Gln His Ala Val Gly Ile Val Val Asn Lys Gln Val Lys Gly Lys Ile Leu Ala Lys Arg Ile Asn Val Arg Ile 90 Glu His Ile Lys His Ser Lys Ser Arg Asp Ser Phe Leu Lys Arg Val 100 105 Lys Glu Asn Asp Gln Lys Lys Glu Ala Lys Glu Lys Gly Thr Trp Val Gln Leu Lys Arg Xaa Pro 130 <210> 1572 <211> 71 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (7) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (8) <223> Xaa equals any of the naturally occurring L-amino acids

<223> Xaa equals any of the naturally occurring L-amino acids

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<220>
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<220>
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<222> (27)
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<221> SITE
<222> (30)
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<223> Xaa equals any of the naturally occurring L-amino acids
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<222> (69)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 1572
Thr Ala Thr Pro Ala Asn Xaa Xaa Leu Pro Trp Gly Xaa Lys Lys Xaa
                                     10
Ala Arg Arg Ser Lys Ile Xaa Ser Phe Val Xaa Val Cys Xaa Tyr Asn
             20
                                 25
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His Leu Met Pro Xaa Arg Tyr Ser Val Xaa Tyr Ser Pro Trp Gly Lys
 Ala Val Arg Ser Leu Gly Cys Leu Pro Xaa Phe Leu Ala Leu Lys Arg
                          55
                                               60
 Xaa Ala Arg Arg Xaa Pro Arg
  65
 <210> 1573
 <211> 68
 <212> PRT
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 <221> SITE
 <222> (62)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
 <221> SITE
<222> (67)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 1573
Ala Ala Ala Lys Gly Ala Ala Ala Met Ser Ala His Leu Gln Trp Met
Val Val Arg Asn Cys Ser Ser Phe Leu Ile Lys Arg Asn Lys Gln Thr
             20
Tyr Ser Thr Glu Pro Asn Asn Leu Lys Ala Arg Asn Ser Phe Arg Tyr
Asn Gly Leu Ile His Arg Lys Thr Val Gly Xaa Glu Pro Xaa Ala Asp
Gly Lys Xaa Val
65
<210> 1574
<211> 127
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<212> PRT
<213> Homo sapiens
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<221> SITE
<222> (4)
<223> Xaa equals any of the naturally occurring L-amino acids
Gly Arg Met Xaa Pro Ala Lys Lys Gly Glu Lys Lys Lys Gly Arg
                 5
Ser Ala Ile Asn Glu Val Val Thr Arg Glu Tyr Thr Ile Asn Ile His
Lys Arg Ile His Gly Val Gly Phe Lys Lys Arg Ala Pro Arg Ala Leu
        . 35
                            Lys Glu Ile Arg Lys Phe Ala Met Lys Glu Met Gly Thr Pro Asp Val
Arg Ile Asp Thr Arg Leu Asn Lys Ala Val Trp Ala Lys Gly Ile Arg
Asn Val Pro Tyr Arg Ile Arg Val Arg Leu Ser Arg Lys Arg Asn Glu
Asp Glu Asp Ser Pro Asn Lys Leu Tyr Thr Leu Val Thr Tyr Val Pro
Val Thr Thr Phe Lys Asn Leu Gln Thr Val Asn Val Asp Glu Asn
       115
                          120
<210> 1575
<211> 115
<212> PRT
<213> Homo sapiens
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<213> Homo sapiens

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<222> (12)
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<222> (18)
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<223> Xaa equals any of the naturally occurring L-amino acids
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<222> (49)
<223> Xaa equals any of the naturally occurring L-amino acids
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<400> 1575
Trp Phe Pro Arg Ala Ala Gly Phe Arg His Xaa Xaa Val Gln Ile Arg
Ala Xaa Glu Arg Lys Gly Thr Ser Ser Phe Gly Lys Xaa Arg Asn Lys
             20
                                 25
                                                     30
Thr His Thr Leu Cys Arg Arg Xaa Gly Ser Lys Ala Tyr His Leu Gln
Xaa Ser Thr Cys Gly Lys Phe Gly Tyr Pro Ala Lys Arg Lys Arg Lys
    50
Xaa Asn Trp Ser Ala Lys Ala Lys Arg Arg Asn Thr Thr Gly Thr Gly
65
                     70
```

Arg Xaa Arg His Leu Lys Phe Val Tyr Arg Arg Phe Arg His Gly Phe

1644

85 90 95 Xaa Glu Gly Thr Thr Pro Lys Pro Lys Arg Ala Ala Val Ala Ala Ser 100 105 Ser Ser Ser <210> 1576 <211> 121 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (108) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (114) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (116) <223> Xaa equals any of the naturally occurring L-amino acids <400> 1576 Gly Arg Arg Ser Glu Met Thr Lys Gly Thr Ser Ser Phe Gly Lys Arg 10 Arg Asn Lys Thr His Thr Leu Cys Arg Arg Cys Gly Ser Lys Ala Tyr 25 His Leu Gln Lys Ser Thr Cys Gly Lys Cys Gly Tyr Pro Ala Lys Arg 35 Lys Arg Lys Tyr Asn Trp Ser Ala Lys Ala Lys Arg Arg Asn Thr Thr Gly Thr Gly Arg Met Arg His Leu Lys Ile Val Tyr Arg Arg Phe Arg 65 70 His Gly Phe Arg Glu Gly Thr Thr Pro Lys Pro Lys Arg Ala Ala Val

Ala Ala Phe Gln Phe Ile Phe Lys Asn Val Asn Xaa Phe Ser His Ala 105

110

Ile Xaa Cys Xaa Gly Val Leu Lys Asn

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115
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  <211> 61
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 Gly Ile Val Gly Lys Tyr Gly Thr Arg Tyr Gly Ala Ser Leu Arg Lys
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Met Val Lys Lys Ile Glu Ile Ser Gln His Ala Lys Tyr Thr Cys Ser
              20
Phe Cys Gly Lys Thr Lys Met Lys Arg Arg Ala Val Gly Ile Trp His
         35
                             40
Cys Gly Ser Cys Met Lys Thr Val Xaa Gly Xaa Ala Xaa
     50
<210> 1578
<211> 74
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<221> SITE <222> (2)

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Glu Leu Gly Lys Gly Lys Met Glu Lys Pro Ser Pro Tyr Pro Ala Gln
                                10
Gly Pro Cys Ile Ile Tyr Asn Glu Asp Asn Gly Ile Ile Lys Ala Phe
Gln Lys His Pro Trp Asn Tyr Ser Ala Xaa Met Xaa Ser Lys Leu Lys
                           40
His Phe Xaa Ser Leu Leu Pro Gly Gly Ala Cys Gly Asp Val Xaa Gly
                         55
Ile Gly Xaa Glu Met Ala Phe Pro Gly Xaa
<210> 1579
<211> 98
<212> PRT
<213> Homo sapiens
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 Ser Xaa Met Ala Cys Ala Arg Pro Leu Ile Ser Val Tyr Ser Glu Lys
 Gly Glu Ser Ser Gly Lys Asn Val Thr Leu Pro Ala Val Phe Lys Ala
                                  25
                                                       30
 Pro Ile Arg Pro Asp Ile Val Asn Phe Val His Thr Asn Leu Arg Lys
 Asn Asn Arg Gln Pro Tyr Ala Val Ser Glu Leu Ala Gly His Gln Thr
      50
                          55
 Ser Ala Glu Ser Trp Gly Thr Gly Arg Ala Val Ala Arg Ile Pro Arg
 Xaa Arg Gly Gly Gly Thr Xaa Arg Ser Gly Xaa Gly Ala Phe Gly Asn
                  85
                                     90
 Met Cys
<210> 1580
<211> 72
<212> PRT
<213> Homo sapiens
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<222> (50)
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<220>
<221> SITE
<222> (55)
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Leu Ser Leu Xaa Gly Lys Lys Lys Lys Arg Leu Arg Val Asp Lys Trp
Trp Gly Xaa Arg Lys Glu Leu Ala Thr Val Arg Thr Ile Cys Ser His
Val Gln Asn Met Ile Lys Gly Val Thr Leu Gly Phe Arg Tyr Lys Met
        35
                            40
Arg Xaa Val Tyr Ala His Xaa Pro Ile Asn Val Val Ile Gln Glu Xaa
                        55
Gly Ser Ile Val Glu Ile Xaa Xaa
                    70
```

<210> 1581

<211> 153

<212> PRT

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<213> Homo sapiens <400> 1581 Ala Ile Met Gly Arg Met His Ala Pro Gly Lys Gly Leu Ser Gln Ser Ala Leu Pro Tyr Arg Arg Ser Val Pro Thr Trp Leu Lys Leu Thr Ser 20 Asp Asp Val Lys Glu Gln Ile Tyr Lys Leu Ala Lys Lys Gly Leu Thr Pro Ser Gln Ile Gly Val Ile Leu Arg Asp Ser His Gly Val Ala Gln Val Arg Phe Val Thr Gly Asn Lys Ile Leu Arg Ile Leu Lys Ser Lys 70 Gly Leu Ala Pro Asp Leu Pro Glu Asp Leu Tyr His Leu Ile Lys Lys 90 Ala Val Ala Val Arg Lys His Leu Glu Arg Asn Arg Lys Asp Lys Asp 110 Ala Lys Phe Arg Leu Ile Leu Ile Glu Ser Arg Ile His Arg Leu Ala 120 Arg Tyr Tyr Lys Thr Lys Arg Val Leu Pro Pro Asn Trp Lys Tyr Glu 135 Ser Ser Thr Ala Ser Ala Leu Val Ala 150 <210> 1582 <211> 129 <212> PRT <213> Homo sapiens <400> 1582 Gly Pro Ala Asn Met Gly Arg Val Arg Thr Lys Thr Val Lys Lys Ala

Ala Arg Val Ile Ile Glu Lys Tyr Tyr Thr Arg Leu Gly Asn Asp Phe 20 25 30

His Thr Asn Lys Arg Val Cys Glu Glu Ile Ala Ile Ile Pro Ser Lys  $35 \hspace{1cm} 40 \hspace{1cm} 45$ 

Lys Leu Arg Asn Lys Ile Ala Gly Tyr Val Thr His Leu Met Lys Arg

50 55 60

Ile Gln Arg Gly Pro Val Arg Gly Ile Ser Ile Lys Leu Gln Glu Glu 65 70 75 80

Glu Arg Glu Arg Arg Asp Asn Tyr Val Pro Glu Val Ser Ala Leu Asp
85 90 95

Gln Glu Ile Ile Glu Val Asp Pro Asp Thr Lys Glu Met Leu Lys Leu 100 105 110

Leu Asp Phe Gly Ser Leu Ser Asn Leu Gln Ser Leu Ser Leu Gln Leu 115 120 125

Gly

<210> 1583

<211> 109

<212> PRT -

<213> Homo sapiens

<400> 1583

Asn Asn Gly Arg Ala Lys Lys Gly Arg Gly His Val Gln Pro Ile Arg 1 5 10 15

Cys Thr Asn Cys Ala Arg Cys Val Pro Lys Asp Lys Ala Ile Lys Lys
20 25 30

Phe Val Ile Arg Asn Ile Val Glu Ala Ala Ala Val Arg Asp Ile Ser 35 40 45

Glu Ala Ser Val Phe Asp Ala Tyr Val Leu Pro Lys Leu Tyr Val Lys
50 55 60

Leu His Tyr Cys Val Thr Val Pro Ser Ile Ala Arg Leu Leu Gly Ile 65 70 75 80

Asp Pro Ala Lys Pro Gly Arg Thr Glu His Pro His His Asp Ser Asp 85 90 95

Leu Leu Ala Leu His Leu Arg Pro Pro Pro Lys Pro Met 100 105

<210> 1584

<211> 119

<212> PRT

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 <222> (99)
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 <222> (118)
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 <400> 1584
 Val Gln Arg Phe Ile Lys Ile Asp Gly Lys Val Arg Thr Asp Ile Thr
 Tyr Pro Ala Gly Phe Met Asp Val Ile Ser Ile Asp Lys Thr Gly Glu
             20
 Asn Phe Arg Leu Ile Tyr Asp Thr Lys Gly Arg Phe Ala Val His Arg
                              40
 Ile Thr Pro Glu Glu Ala Lys Tyr Lys Leu Cys Xaa Val Arg Lys Ile
Phe Val Gly Thr Lys Gly Ile Pro His Leu Val Thr His Asp Ala Arg
Thr Ile Arg Tyr Pro Asp Pro Leu Ile Lys Val Asn Asp Pro Phe Ile
                85
                                     90
Leu Ile Xaa Arg Leu Ala Arg Leu Leu Ile Ser Ser Ile Ser Thr Leu
            100
                               105
Val Thr Cys Val Trp Xaa Leu
        115
<210> 1585
<211> 81
<212> PRT
<213> Homo sapiens
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<221> SITE
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<222> (14)
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<223> Xaa equals any of the naturally occurring L-amino acids
<400> 1585
Gly Arg Tyr Ala Ala Lys Arg Phe Arg Lys Ala Gln Cys Xaa Ile Val
                           10.
Glu Arg Leu Thr Asn Ser Met Met Met Xaa Gly Arg Asn Asn Gly Lys
             20
Lys Leu Met Thr Val Arg Ile Val Xaa His Ala Phe Glu Ile Ile Arg
Leu Leu Thr Gly Xaa Glu Pro Ser Ala Gly Pro Gly Glu Arg His His
     50
                         55
                                             60
Gln His Xaa Ser Pro Gly Arg Xaa His Xaa His Trp Ala Arg Arg Asp
 65
                    70
Cys
```

```
<213> Homo sapiens
 <400> 1586
 Lys Asn Cys Ile Val Leu Ile Asp Ser Thr Pro Tyr Arg Gln Trp Tyr
 Glu Ser His Tyr Ala Leu Pro Leu Gly Arg Lys Lys Gly Ala Lys Leu
                                 25
 Thr Pro Glu Glu Glu Ile Leu Asn Lys Lys Arg Ser Lys Lys Ile
                              40
 Gln Lys Lys Tyr Asp Glu Arg Lys Lys Asn Ala Lys Ile Ser Ser Leu
 Leu Glu Glu Gln Phe Gln Gln Gly Lys Leu Leu Ala Cys Ile Ala Ser
                     7.0
                                         75
 Arg Pro Gly Gln Cys Gly Arg Ala Asp Gly Tyr Val Leu Glu Gly Lys
Glu Leu Glu Phe Tyr Leu Arg Lys Ile Lys Ala Arg Lys Gly Lys
                                105
<210> 1587
<211> 125
<212> PRT
<213> Homo sapiens
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<223> Xaa equals any of the naturally occurring L-amino acids
<400> 1587
Arg Thr Met Pro Gly Val Thr Val Lys Asp Val Asn Gln Glu Phe
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<210> 1586 <211> 111 <212> PRT

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Val Arg Ala Leu Ala Ala Phe Leu Lys Lys Ser Gly Lys Leu Lys Val 20 25 30
```

- Pro Glu Trp Val Asp Thr Val Lys Leu Ala Lys His Lys Glu Leu Ala 35 40 45
- Pro Tyr Asp Glu Asn Trp Phe Tyr Thr Arg Ala Ala Ser Thr Ala Arg 50 55 60
- His Leu Tyr Leu Arg Gly Gly Ala Gly Val Gly Ser Met Thr Lys Ile 65 70 75 80
- Tyr Gly Gly Arg Gln Arg Asn Gly Val Met Pro Ser His Phe Ser Arg
  85 90 95
- Gly Ser Lys Ser Val Ala Arg Arg Xaa Leu Gln Ala Leu Gly Gly Ala 100 105 110
- Glu Asn Gly Gly Xaa Gly Pro Arg Trp Arg Pro Ala Asn 115 120 125

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<210> 1588
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<211> 38

<212> PRT

<213> Homo sapiens

<220>

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<220>

<221> SITE

<222> (8)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (19)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

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<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (33)

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  <220>
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 <222> (35)
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 <400> 1588
 Cys Met Leu Xaa Leu Val Leu Xaa Leu Leu Ser Ser Ser Ala Glu
   1
                                 10
 Glu Tyr Xaa Gly Leu Ser Ala Asn Gln Cys Ala Val Xaa Ala Lys Asp
 Xaa Val Xaa Cys Gly Tyr
         35
 <210> 1589
 <211> 55
 <212> PRT
 <213> Homo sapiens
 <400> 1589
Gly Thr Ala Thr Gln Gly Leu Ser Pro Val His Thr Pro Gly Asp Gly
                                     10
Arg Leu His Lys Ala Val Ser Val Gly Pro Arg Val His Ile Ile Glu
Glu Leu Gln Ile Phe Ser Ser Gly Gln Pro Val Ala Glu Ser Ala Pro
         35
                             40
Gly Thr Pro Thr Gly Gly Leu
     50
<210> 1590
<211> 92
<212> PRT
<213> Homo sapiens
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<223> Xaa equals any of the naturally occurring L-amino acids
<400> 1590
Leu Glu Asp Gly Phe Gly Glu His Pro Phe Tyr His Cys Leu Xaa Ala
```

1 10 15 Glu Val Pro Lys Glu His Trp Thr Pro Glu Gly His Ser Ile Val Gly 20 Phe Ala Met Tyr Tyr Phe Thr Tyr Asp Pro Trp Ile Gly Lys Leu Leu Tyr Leu Glu Asp Phe Phe Val Met Ser Asp Tyr Arg Gly Phe Gly Ile 50 55 60 Gly Ser Glu Ile Leu Lys Asn Leu Ser Gln Val Ala Met Arg Cys Arg 70 Cys Ser Ser Met His Phe Phe Gly Ser Arg Met Glu 85 <210> 1591 <211> 139 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (1) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (5) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (10) <223> Xaa equals any of the naturally occurring L-amino acids Committee of the Commit <220> <221> SITE <222> (56) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE

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<222> (114)
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 <222> (125)
 <223> Xaa equals any of the naturally occurring L-amino acids
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<222> (133)
<223> Xaa equals any of the naturally occurring L-amino acids
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                                     10
                                                          15
Thr Pro Ala Gly Asp Arg Ser Gly Ile Pro Gly Ser Thr His Ala Ser
Gly Arg Asp Val Ser Gln Lys Val Leu Arg Ser Gln Thr Trp Val Pro
         35
                             40
Arg Leu Pro Ala Ser Glu Ala Xaa Ser Arg His Arg Gly Lys Val Lys
Ser Phe Pro Lys Asp Asp Pro Ser Lys Pro Val His Leu Thr Ala Phe
 65
                     70
                                       75
Leu Gly Tyr Lys Ala Gly Met Thr His Ile Val Arg Glu Val Asp Arg
Pro Gly Ser Lys Val Asn Lys Lys Glu Gly Gly Gly Cys Asp His
                               105
Cys Xaa Asp Thr Xaa His Gly Gly Leu Trp Ala Leu Xaa Ala Thr Leu
       115
                            120
Glu Asn Pro Arg Xaa Leu Arg Asn Phe Lys Asn
```

<sup>&</sup>lt;210> 1592

<sup>&</sup>lt;211> 42

<sup>&</sup>lt;212> PRT

```
<213> Homo sapiens
 <400> 1592
 Ala Glu His Gly Asp Gln Asp Tyr Ile Trp His Cys Ile Asp Leu Phe
                                   10
 Leu Asp Phe Ile Thr Val Phe Arg Lys Leu Met Met Ile Leu Ala Met
                                25
 Asn Glu Lys Asp Lys Lys Glu Lys Lys
                           40
<210> 1593
<211> 85
<212> PRT
<213> Homo sapiens
                         <220>
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<222> (31)
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<221> SITE
<222> (33)
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<221> SITE
<222> (47)
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<221> SITE
<222> (56)
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<220>
<221> SITE .
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  <221> SITE
 <222> (62)
 <223> Xaa equals any of the naturally occurring L-amino acids
 <220>
 <221> SITE
 <222> (79)
 <223> Xaa equals any of the naturally occurring L-amino acids
 <400> 1593
 Trp Ile Pro Arg Ala Ala Gly Ser Leu Ser Leu Ala Gln Arg Arg Gly
                                      10
 Xaa Thr Lys Thr Tyr Thr Val Gly Xaa Glu Glu Cys Thr Val Xaa Pro
 Xaa Leu Ser Ile Pro Cys Lys Leu Gln Ser Gly Thr His Cys Xaa Trp
 Thr Asp Gln Leu Leu Gln Gly Xaa Glu Lys Gly Xaa Gln Xaa Arg His
      50
                                              60
 Leu Ala Cys Leu Pro Arg Glu Pro Gly Leu Gly Thr Trp Gln Xaa Leu
                                          75
Arg Ser Gln Ile Ala
                  85
<210> 1594
<211> 183
<212> PRT
<213> Homo sapiens
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<221> SITE
<222> (80)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
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<222> (107)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
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<220>
<221> SITE
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<223> Xaa equals any of the naturally occurring L-amino acids
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<221> SITE
<222> (151)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (152)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (160)
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Ala Ala Arg Gly Ala Gln Arg Asp Thr Arg Glu Pro Thr Met Ala Pro
                                10
Phe Glu Pro Leu Ala Ser Gly Ile Leu Leu Leu Trp Leu Ile Ala
Pro Ser Arg Ala Cys Thr Cys Val Pro Pro His Pro Gln Thr Ala Phe
        35
                            40
Cys Asn Ser Asp Leu Val Ile Arg Ala Lys Phe Val Gly Thr Pro Glu
                       55
Val Asn Gln Thr Thr Leu Tyr Gln Arg Tyr Glu Ile Lys Met Thr Xaa
Met Tyr Lys Gly Phe Gln Ala Leu Gly Asp Ala Ala Asp Ile Arg Phe
                85
                     . ... 90
                                          . 95
Val Tyr Thr Pro Ala Met Glu Ser Val Cys Xaa Tyr Phe His Arg Ser
His Asn Arg Ser Glu Glu Phe Leu Ile Xaa Gly Lys Leu Gln Asp Gly
       115
                          120
Leu Leu His Ile Thr Thr Cys Xaa Phe Val Ala Pro Trp Asn Ser Leu
   130
                     135
```

Ser Leu Ala Gln Arg Arg Xaa Xaa Thr Lys Thr Tyr Thr Val Gly Xaa Glu Glu Met His Lys Cys Phe Pro Val Tyr Pro Ser Pro Ala Asn Cys 165 170 Arg Val Gly Thr His Cys Leu 180 <210> 1595 <211> 153 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (143) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (151) <223> Xaa equals any of the naturally occurring L-amino acids <400> 1595 Ser Thr Cys Pro Asp Glu Gln Cys Val Asn Ser Pro Gly Ser Tyr Gln 5 10 Cys Val Pro Cys Thr Glu Gly Phe Arg Gly Trp Asn Gly Gln Cys Leu Asp Val Asp Glu Cys Leu Glu Pro Asn Val Cys Ala Asn Gly Asp Cys 35 Ser Asn Leu Glu Gly Ser Tyr Met Cys Ser Cys His Lys Gly Tyr Thr Arg Thr Pro Asp His Lys His Cys Arg Asp Ile Asp Glu Cys Gln Gln 65 Gly Asn Leu Cys Val Asn Gly Gln Cys Lys Asn Thr Glu Gly Ser Phe Arg Cys Thr Val Asp Arg Gly Tyr Gln Leu Ser Ala Ala Lys Asp Gln 105 Phe Glu Asp Ile Asp Glu Cys His Thr Val Ile Ser Val Ala His Gly 115 120

<222> (19)

```
His Ala Arg Thr Leu Lys Leu Phe Ser Met Cys Phe Leu Thr Xaa Val
Thr Glu His Leu Gly Leu Xaa Thr Leu
                     150
<210> 1596
<211> 111
<212> PRT
<213> Homo sapiens
<220>
<221> SITE
              e contra e communicación de la companya de la comp
<222> (102)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 1596
Leu Gly Ser Ser Ala Met Ala Pro Ser Arg Lys Phe Phe Val Gly Gly
Asn Trp Lys Met Asn Gly Arg Lys Gln Ser Leu Gly Glu Leu Ile Gly
             20
                                 25
Thr Leu Asn Ala Ala Lys Val Pro Ala Asp Thr Glu Val Val Cys Ala
Pro Pro Thr Ala Tyr Ile Asp Phe Ala Arg Gln Lys Leu Asp Pro Lys
                        55. ___60
Ile Ala Val Ala Ala Gln Asn Cys Tyr Lys Val Thr Asn Gly Ala Phe
Thr Gly Glu Ile Ser Pro Gly Met Ile Lys Asp Cys Gly Pro Arg Gly
Trp Ser Trp Gly Thr Xaa Arg Glu Ala Cys Leu Trp Gly Ile Arg
           100 105 110
<210> 1597
<211> 82
<212> PRT
<213> Homo sapiens
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<221> SITE
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<223> Xaa equals any of the naturally occurring L-amino acids

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  <222> (71)
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  <221> SITE
  <222> (79)
  <223> Xaa equals any of the naturally occurring L-amino acids
 <220>
 <221> SITE
 <222> (80)
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 <400> 1597
 Ile Phe Glu Asp Ser Asp Ser Leu Arg Leu Arg Arg Asp Val Leu Pro
                   5
                                      1.0
 Ala Ala Xaa Val Gln Ala Ala Leu Pro Ala Thr Ser Cys Val Pro His
 Ala Lys Val Pro Lys Ser His Val His Pro Arg Ser Ala Leu Ser Leu
          35
                              40
 Thr Cys Leu Leu Val His Leu Ser Ile Ala His Leu His Leu Ala
 Ser Ile Asn Ala Leu Leu Xaa Gln Pro Tyr His Pro Gly Ser Xaa Xaa
                     7.0
 Ser Pro
<210> 1598
<211> 52
<212> PRT
<213> Homo sapiens
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<221> SITE
<222> (3)
<223> Xaa equals any of the naturally occurring L-amino acids
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 <220>
                                                        <221> SITE
 <222> (19)
 <223> Xaa equals any of the naturally occurring L-amino acids
                                                                                     من الأميان المنظمة الم
 <220>
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                                                                                                <222> (26)
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<222> (36)
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<221> SITE
<222> (47)
<223> Xaa equals any of the naturally occurring L-amino acids
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<222> (48)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (49)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 1598
Xaa Lys Xaa Gly Arg Asn Lys Ala Arg Pro Leu Thr Ser Leu Arg Xaa
                                                    5
                                                                                             10
Thr Phe Xaa Ala Thr Phe Cys Pro Val Xaa Gly Thr Tyr Ile Leu Asn
                                                                                                25
Asp Cys Pro Xaa Thr His Ser Gly Ile Phe Phe Leu Lys Xaa Xaa
                       -35
                                                                                     40
Xaa Lys Ala Phe
        50
```

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<210> 1599
<211> 32
<212> PRT
<213> Homo sapiens
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<222> (15)
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<222> (26)
<223> Xaa equals any of the naturally occurring L-amino acids
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<221> SITE
<222> (27)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 1599
Ala Phe Asn Xaa Ser Tyr Arg Lys Xaa Val Xaa Ala Val Arg Xaa Glu
                  5
                                     10
Phe Arg Val Thr Gln Arg Pro Gly Leu Xaa Xaa Leu Gly Leu Glu Phe
             20
                                 25
```

<sup>&</sup>lt;210> 1600

<sup>&</sup>lt;211> 19

<sup>&</sup>lt;212> PRT

<sup>&</sup>lt;213> Homo sapiens

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<220>
<221> SITE
<222> (12)
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<220>
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<222> (13)
<223> Xaa equals any of the naturally occurring L-amino acids
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               <220>
<221> SITE
<222> (15)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 1600
Ala Arg Gly Phe Phe Phe Phe Phe Phe Phe Xaa Xaa Phe Xaa Phe
1 . 5
                    10
Phe Lys Lys
<210> 1601
<211> 22
<212> PRT
<213> Homo sapiens
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<222> (20)
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<222> (22)
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5
                       10
              ..
Phe Phe Phe Xaa Pro Xaa
          20
```

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 <211> 104
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 Asp Phe Gly Arg Ser Phe Leu Leu Trp Phe Ser Leu Phe Phe Leu Pro
 Phe Tyr Ser Ala Arg Ile Ser Gly Gly Leu Met Val Gly Tyr Asn Val
              20
                                  25
 Ser Val Leu Gln Ile Gly Leu Lys Gly Tyr Pro Ala Glu Ser Pro
                              40
 Ala Phe Leu Ser Ser Ile Tyr Phe Ser Gly Lys Leu Phe Phe Leu Phe
                          55
                                              6.0
 Phe Phe Lys Val Asn Leu Cys Ile Glu Leu Asn Cys Ile Ser Val Phe
Pro Ala Tyr Val Tyr Ile Ile Pro Met Ile Pro Asn Ser Tyr Leu Tyr
                  85
Phe Xaa Thr Asn Ser Gln Ser Glu
            100
<210> 1603
<211> 86
<212> PRT
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    <222> (73)
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   <220>
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   <222> (80)
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                                                      to the control of the
   <220>
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   <222> (81)
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   <400> 1603
  Phe Leu Met Leu Ser Phe Met Gly Ile Val Thr Phe Leu Phe Ser Lys
                                                                                                                                                                                                                                  10
  Ser His Cys Trp Asn His Gln Gly Cys Gly Met Ser Leu Xaa Val Leu
                                                                                20
                                                                                                                                                                                                     25
 Phe Met Gln Val Thr Val Thr Phe Ala Ile Met Ala Xaa Phe Glu Thr
                                                                                                    40
 Leu Ile Met Cys Phe Tyr Phe Phe Ile Pro Val Lys Met Xaa Xaa Lys
                                                                                                                                                        55
 Arg Lys Lys Val Val Ile Ala Pro Xaa Ile Ser Gly Ser Lys Leu Xaa
    65 70 75 80
Xaa Lys Phe Pro Lys Lys
                                                                               and the second of the second o
<210> 1604
<211> 34
<212> PRT
                                                                                                                                                     and the second second
<213> Homo sapiens
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<400> 1604

```
Ser Asp Glu Ile Ile Tyr Asn Phe Ile Val Thr Ser Ser Val Phe Pro
                                        10
  Phe Glu Arg Cys Met Asn Ser Leu His Phe Tyr Ser Asn Val Leu Ser
               20
                                   25
  Val Asp
 <210> 1605
 <211> 53
 <212> PRT
 <213> Homo sapiens
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<222> (45)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (48)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 1605
Leu Leu Val Trp Ser Glu Tyr Asn Thr Ser Ile Ile Thr Tyr Asn Ser
                                     10
                                                         15
```

```
Xaa Pro Gly Thr Gly Gly Tyr Lys Tyr Asn Phe Phe Lys Xaa Asn Ser
            20
                                25
Trp Leu Ser Thr Xaa Leu Gln Val Pro Leu Xaa Gly Xaa Leu Trp Xaa
         35 40
Ile Thr Leu Gly Lys
     50
                         <210> 1606
<211> 32
<212> PRT
<213> Homo sapiens
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<222> .(20)
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Asp Ala Trp Ala Asp Ala Trp Gly Lys Val Ser Ser Ser Leu Xaa Ser
                                       10
  Xaa Ile Cys Xaa Leu Xaa Xaa Arg Lys Val Arg Xaa Gly Gln Xaa Met
               20
                                   25
 <210> 1607
 <211> 31
 <212> PRT
 <213> Homo sapiens
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Leu Ile Met Asp Thr Ile Leu Asn Lys Xaa Ile Gln Val Lys Pro Val
Lys Glu Lys Glu Ile Lys Val Ser Gly Ser Cys Xaa Ser Xaa Val
             20
                                 25
<210> 1608
<211> 107
<212> PRT
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<400> 1606

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<222> (55)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
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WO 00/55350 PCT/US00/05882

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 <221> SITE
 <222> (107)
 <223> Xaa equals any of the naturally occurring L-amino acids
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 Asp Pro Gln Gly Ile Arg His Pro His Ile Val Gln Leu Lys Asp Phe
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Leu Ser Gln Gly Gln Val His Gly Glu Thr Met Gly Cys Leu Ser Asp 35 40 45

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  Ile Xaa Met Tyr Leu Trp Val Gln Ala Leu Phe Gly Gly Phe Xaa Phe
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 Ile Ile Lys Asn Ile Ser Asn Tyr Tyr Thr His Thr Lys Xaa Val Gln
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Gly Gly Xaa Arg Xaa
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## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US00/05882

BOX II. OBSERVATIONS WHERE UNITY OF INVENTION IS LACKING This application contains the following inventions or groups of inventions which are not so linked as to form a single inventive concept under PCT Rule 13.1.

Group 1, claims 1-12, 14-16, and 21 in so far as they are drawn to the first ten polynucleotides of Table 1 (pages 12-118), protein, vector, gene, method of making host cell, recombinant host cell, method of producing the protein of SEQ ID NO:61.

Groups 2-209, claims 1-12, 14-16, in so far as they are drawn to the next 208 polynucleotide groups (any four sequences constitute

Groups 2-20-3, chaims 1-12, 14-16, in so far as they are drawn to the next 200 polynucleotide groups (any four sequences constitute a single group) and encoded proteins listed in Table 1.

Groups 210-418, claim 13, in so far as they are drawn to isolated antibodies that bind to any one group of the next 208 polypeptide

sequence groups listed in Table 1.

Groups 419-627, claims 15-16, in so far as they are drawn to a method of making any one group of the next 208 polypeptide

sequence groups listed in Table 1.

Groups 628-836, claim 17, in so far as they are drawn to a method of treatment by administration any one group of the next 208

polypeptide sequence groups listed in Table 1.

Groups 837-1045, claim 18, in so far as they are drawn to a method of diagnosing a pathological condition by determining a

oroups 637-1045, claim 19, in so far as they are drawn to a method of diagnosing a pathological condition by determining a presence or absence of a mutation in any one group of the next 208 polypeptide sequence groups listed in Table 1.

Groups 1046-1255, claim 19, in so far as they are drawn to a method of diagnosing a pathological condition by determining the

Groups 1040-1255, claim 19, in so far as they are drawn to a method of diagnosing a pathological condition by determining the presence or amount of any one group of the next 208 polypeptide sequence groups listed in Table 1.

Groups 1256-1465, claims 20 and 23, in so far as they are drawn to a method of identifying any one group of the next 208 polypeptide sequence groups listed in Table 1, and the product produce by the same method.

Group 1466-1675, claim 22, in so far as they are drawn to a method of identifying an activity in a biological assay by expression of any one group of the next 208 polypeptide sequence groups listed in Table 1.

The inventions not elected, do not relate to a single inventive concept under PCT Rule 13.1 because, under PCT rule 13.2, the non-elected groups lack the same or corresponding technical features for the following reasons: Group 1 corresponds to the first invention wherein the first product is the polynucleotide, and the first method of use is the method of using the polynucleotide to make the protein, and the protein. Note, there is no method of making the polynucleotide. Each of groups 2-1675 does not share the same or corresponding special technical feature because, each group is drawn to different polynucleotide or encoded protein. Additionally, each of groups 210-1675 does not share the same or corresponding technical feature because, each group is drawn to different compounds or methods of using any of the fifty polynucleotides and encoded proteins listed in Table 1. The Authority therefore considers that the several inventions do not share a special technical feature within the meaning of PCT Rule 13.2 and thus do not relate to a single general inventive concept within the meaning of PCT Rule 13.1.

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US00/05882

Box I Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet)
This international report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:
1. Claim Nos.:  because they relate to subject matter not required to be searched by this Authority, namely:
Claim Nos.:  because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. Claim Nos.:  because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).
Box II Observations where unity of invention is lacking (Continuation of Item 2 of first sheet)
This International Searching Authority found multiple inventions in this international application, as follows: Please See Continuation Sheet
As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.: 1-12, 14-16, and 21 for the first 10 sequences in Table 1
Remark on Protest  The additional search fees were accompanied by the applicant's protest.  No protest accompanied the payment of additional search fees.

Form PCT/ISA/210 (continuation of first sheet(1)) (July 1998)

## INTERNATIONAL SEARCH REPORT

International application No.
PCT/US00/05882

	PCT/US00/0588	2_		
C (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT				
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.		
Y	Database GenEmbl on STN. SHARMA et al 'Human class III alcohol dehydrogenase (ADH5) chi	1-12, 14-16, and 21 for		
	subunit mRNA, complete cds.', GenEmbl Database, Accession M30471, Version M30471.1 GI:178133	SEQ ID NO:8		
	5 October, 1995 (05.10.1997), see nucleotide position 2-2277.			
Y	Develop Co-F-blac CTM ADEDDED AV AV			
Y I	Database GenEmbl on STN. ABEDINIA, M. 'Human transketolase (TKT) mRNA, complete cds.',	1-12, 14-16, and 21 for		
•	GenEmbl, Accession U55017 M86521, Version U55017.1 GI:1297296, 6 May, 1996 (06.05.1996), see nucleotide position 687-2038.	SEQ ID NO:10		
	microtice pusition 067-2036.			
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	/210 (continuation of second sheet) (July 1009)			

Form PCT/ISA/210 (continuation of second sheet) (July 1998)

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US00/05882

A. CLASSIFICATION OF SUBJECT MATTER  IPC(7) : C12P 19/34					
US CL: 435/91.1 According to International Patent Classification (IPC) or to both national classification and IPC					
B. FIELDS SEARCHED					
Minimum documentation searched (classification system followed by classification symbols) U.S.: 435/91.1					
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched					
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) MEDLINE, SCISEARCH, GenEmbl Database					
C. DOCUMENTS CONSIDERED TO BE RELEVANT					
Category *	Citation of document, with indication, where a		Relevant to claim No.		
Y	Database GenEmbl on STN. KELKER, W. 'Seque GenEmbl Database, Accession Z18923.1, Version 2 1992 (04.12.1992), see nucleotide position 456-100	1-12, 14-16, and 21 for SEQ ID NO:1			
Y	BANERJI, J. A gene pair from the human major hi proline-rich proteins with multiple repeated motifs Proc. Natl. Acad. Sci. USA, 1990, Vol 87, pages 2	1-12, 14-16, and 21 for SEQ ID NO:2			
Y	Database GenEmbl on STN. SKUCE, C. 'Homo sapiens chromosome 20 clone RP4-661120 map q11.23-12', GenEmbl Database, Accession AL031669, Version AL031669.18 GI:6983365, 11 FEBRUARY, 2000 (04.02.2000), see nucleotide position 63147-63482.		1-12, 14-16, and 21 for SEQ ID NO:3		
Y	Database GenEmbl on STN. RAKER, V.A. 'Human SnRNP core protein Sm D2 mRNA, complete cds'., GenEmbl Database, Accession U15008, Version U15008.1 GI:600747, 10 December, 1994 (10.12.1994), see nucelotide position 23-479		1-12, 14-16, and 21 for SEQ ID NO:4		
Y	Database GenEmbl on STN. ELLER et al. 'Cellular retinoic acid-binding protein [human, skin, mRNA, 735 nt]', GenEmbl Database, Accession S74445, Version S74445.1, GI:241541, 7 May, 1993 (07.05.1993), see nucleotide position 7-733.		1-12, 14-16 and 21 for SEQ ID NO:6		
	documents are listed in the continuation of Box C.	See patent family annex.			
"A" document	pecial categories of cited documents: defining the general state of the art which is not considered to be ar relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention			
·	plication or patent published on or after the international filing date	"X" document of particular relevance; the considered novel or cannot be considered novel or cannot be considered to the document is taken along			
"L" document which may throw doubts on priority claim(a) or which is cited to establish the publication date of another citation or other special reason (as specified)		"Y" document of particular relevance; the considered to involve an inventive step combined with one or more other such	when the document is taken alone document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination		
"O" document referring to an oral disclosure, use, exhibition or other means  "P" document published prior to the international filling date but later than the		"&" document member of the same patent	1		
priority date claimed					
Date of the actual completion of the international search		Date of mailing of the international search report  26 JUL 2000			
03 May 2000 (03.05.2000)  Name and mailing address of the ISA/US		Authorized officer	120.10.00		
Commissioner of Patents and Trademarks Box PCT		Michael Woodward			
Washington, D.C. 20231		Telephone No. (703) 308-0196	g-		
	(A10 / 1.1 -> /F.1- 1000)				

Form PCT/ISA/210 (second sheet) (July 1998)

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WO 00/55350 PCT/US00/05882

1736

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Thr Asn Val Arg Cys Val Thr Gly Glu
         35
<210> 1681
<211> 34
<212> PRT
<213> Homo sapiens
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<400> 1681
Gly Xaa Gly Val Arg Val Asn Val Arg Thr Ser Ala Gly Cys Ser Pro
His Pro Asn Pro Leu Pro Lys Gly Arg Arg Gly Pro Val Thr Gln Phe
                                  25
Ala Leu
<210> 1682
<211> 85
<212> PRT
<213> Homo sapiens
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20 25 30

Tyr Xaa Cys Met Xaa Arg Xaa Ser 35 40

<210> 1678

<211> 49

<212> PRT

<213> Homo sapiens

<400> 1678

Thr Ala Ala Met Ser Ile Phe Thr Pro Thr Asn Gln Ile Arg Leu Thr  $1 \hspace{1cm} 5 \hspace{1cm} 10 \hspace{1cm} 15$ 

Asn Val Ala Val Val Arg Met Lys Arg Ala Arg Lys Arg Phe Glu Ile 20 25 30

Ala Cys Tyr Arg Asn Lys Ser Ser Ala Gly Gly Gly Leu Trp Lys Lys
35 40 45

Thr

<210> 1679

<211> 51

<212> PRT

<213> Homo sapiens

<400> 1679

Ala Ala Ala Gln Gln Val Val Asp Gln Ala Thr Glu Ala Gly Gln Lys

1 5 10 15

Ala Met Asp Gln Leu Ala Lys Thr Thr Gln Glu Thr Ile Asp Lys Thr 20 25 30

Ala Asn Gln Ala Ser Asp Thr Phe Ser Gly Ile Gly Lys Lys Phe Gly 35 40 45

Leu Leu Lys 50

<210> 1680

<211> 41

<212> PRT

<213> Homo sapiens

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Ser Tyr Val Ile
    50
<210> 1677
<211> 40
<212> PRT
<213> Homo sapiens
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Lys Lys Lys Lys Lys Gly Gly Arg Xaa Lys Gly Ser Lys Leu Thr
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Leu Val Cys Ile Leu Pro Lys Val Arg Xaa Pro Thr Leu Gly Ile Thr
                                     10
Leu Leu Ile Val Ile Leu Val Xaa Ile Leu Pro Gly Val Met Tyr Ser
             20
Leu Lys Ala Leu Asn Val Cys Ile Ala Thr Xaa His Gln Ile Leu Asn
                             40
Gly Leu Ser Phe Gly Trp Asn Tyr Lys Leu Lys Lys Cys Phe Ser Gly
                         55
Lys
 65
<210> 1676
<211> 52
<212> PRT
<213> Homo sapiens
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<400> 1676
Pro Thr Glu Gln Val Thr Leu Gly Ile Thr Ala Gln Ser Tyr Ser Arg
                 5
Val His Ile Asn Asn Arg Val Tyr Asp Leu Asp Val Gly Ser Gly His
Pro Asp Gly Ala Ala Ala Ile Lys Gly Ser Phe Xaa Gln Arg Leu Lys
        35
                            40
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<223> Xaa equals any of the naturally occurring L-amino acids

<400> 1673

Pro Ala Phe Asn Phe Asp Pro Leu Phe Phe Leu Phe Val Arg Cys Thr
1 5 10 15

Arg Leu Pro Ser Cys Phe Ser Leu Leu Ser Cys His Gln Pro Phe Leu 20 25 30

Leu Gly Gly His Val Leu Gly Lys Arg Pro His Asp Leu Ser Gly Ser 35 40 45

Thr Gln Cys Leu Arg His Pro Ala Ser Phe Ala Cys Ile Pro Gln Thr 50 55 60

Ile Ser Leu Ile Leu Phe Thr Ala Ala Asn Leu Ser Leu Val Asp Glu 65 70 75 80

Thr Val Phe Ile Xaa Leu

<210> 1674

<211> 56

<212> PRT

<213> Homo sapiens

<400> 1674

Ser Asp Tyr Glu Leu Leu Phe Lys Arg Lys Met Leu Phe Ile His Ala  $1 \hspace{1.5cm} 5 \hspace{1.5cm} 10 \hspace{1.5cm} 15$ 

Glu Val Ile Gln Phe Pro Pro Ser Tyr Arg Ser Ile Leu Ile His Pro
20 25 30

Thr Leu Glu Met Gln His Leu Cys Gly Arg Leu Phe His Lys Pro Pro 35 40 45

Arg Leu Leu Arg Leu Gly Arg Tyr 50 55

<210> 1675

<211> 65

<212> PRT

<213> Homo sapiens

<220>

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<212> PRT
 <213> Homo sapiens
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<222> (12)
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<400> 1672
Arg Xaa Leu Leu Thr Ile Xaa Glu Ser Trp Tyr Xaa Cys Arg Tyr Arg
                                10
Ser Gly Ile Pro Gly Gly Ile Pro Leu Ser Pro Arg Asp Pro Thr Leu
Ala Ser Trp Pro Thr Arg Ser Arg Glu Ser Leu Arg Glu Arg Arg Arg
                            40
Ser Arg Ala Ala Ser Gly Leu Gly Ile Arg Pro Leu Gly Pro Pro Leu
                                           60
Val Ser Arg Val Gly Arg Asn Arg Arg Leu Ala His Leu Ala Trp Val
Cys Pro His Val Val Ile Val Gln Ile Asn Ala His Ser Glu Leu Ala
                85
Val Tyr Phe Leu Lys Phe Asn Ile Val Phe Val Ile Leu Lys Tyr Leu
           100
                               105
Leu
```

<sup>&</sup>lt;210> 1673 <211> 86 <212> PRT

<sup>&</sup>lt;213> Homo sapiens

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Ser Leu Thr Gly Gln Ser Leu Val Gly Lys Ala Ala Ser Trp Pro Xaa
100 105 110
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Ser Leu Leu Met Phe Leu Val Ser Arg Val Gln Ser Gln Leu Phe Xaa 115 120 125

Phe Leu Val Val Pro Val Xaa Glu Ala Phe Gln Asn 130 135 140

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<210> 1671
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<211> 34

<212> PRT

<213> Homo sapiens

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<223> Xaa equals any of the naturally occurring L-amino acids

<220>

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<223> Xaa equals any of the naturally occurring L-amino acids

<220>

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<223> Xaa equals any of the naturally occurring L-amino acids

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<222> (27)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 1671

His Xaa Xaa Met Glu Ser Asp Lys Met Val Thr Gly Ser Trp Gly Pro 1 5 10 15

Arg Leu Ser Xaa His Glu Gly Cys Ser Ala Xaa Cys Ile Ser Val Tyr 20 25 30

Val Val

<210> 1672

<211> 113

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1728

Leu Ala Val Xaa Ser Ser Gly Xaa Arg Leu Ala Gly Gly Thr Pro Thr 85 90 95

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<210> 1670
 <211> 140
 <212> PRT
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<223> Xaa equals any of the naturally occurring L-amino acids
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<222> (135)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 1670
Gly Ser Thr His Ala Ser Gly Ser Thr Glu Lys Glu Gly Leu Leu His
                  5
                                    10
                                                         15
Glu Ala Thr Leu Ser Val His Gln Gly Leu Gly Leu Arg Gly Pro Trp
Ser Ser Cys Ser Ser Pro Ala Pro Pro Trp Met His Cys Cys Arg Ala
        35
                             40
                                                 45
Glu Xaa Pro Leu Pro Gly Pro Ala Leu Gly Phe Leu Glu Thr Ser Phe
Ser Phe Ala Ile Phe Phe Lys Trp Glu Lys Gly Gly Gln Leu Ser Leu
                    70
                                        75
Gly Lys Arg Gly Pro Ala Thr Cys Pro Ala Trp Ala Pro Glu Pro Ser
```

1 10 15 Pro Lys Arg Asn Lys Leu Phe Gly His Xaa Glu Lys Thr Leu Tyr Arg 25 Glu Glu Xaa Xaa Phe Xaa Asn Pro Tyr <210> 1669 <211> 96 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (20) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE ~ <222> (77) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (84) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (88) <223> Xaa equals any of the naturally occurring L-amino acids <400> 1669 Gly Arg Ala Leu Pro Gly Arg Val Arg Ala Ala Thr Gly Glu Gly Arg 10 Thr Phe Val Xaa Asn Gly Thr Val Leu Leu Ala Pro Pro Arg Gly Gly Pro Leu Val Ser Pro Leu Pro Ala Arg Arg Cys Val Trp Glu Gly Val Gly Cys Gly Pro Arg Pro Asp Leu Ala Val Pro Pro Ala Ala Phe 50 55 Cys Val Ala Gly Ala Gly Arg Arg Gly Pro Leu Thr Xaa Gln Thr Ala 75 70

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<213> Homo sapiens
 <220>
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 <400> 1667
 Leu Glu Ile Thr Leu Gln Gly Glu Pro Lys Leu Arg Pro Pro Lys Pro
 Glu Arg Ala Thr Leu Glu Gln Leu Lys Glu His Thr Pro Leu Phe Leu
                                   25
 Pro Xaa
 <210> 1668
 <211> 41
<212> PRT
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Ile Cys Pro Gln Asn Pro Leu Asn Pro Leu Val Asn Leu Thr Val Xaa
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<210> 1667 <211> 34 <212> PRT

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 <400> 1665
 Ser Ala Pro Gly Gly Ser Cys Tyr Ser Gly Xaa Pro Arg Val Pro Lys
 Cys Xaa Ile Gln Xaa Asp Pro Xaa Ser Xaa Pro Pro Cys Leu Gln Leu
            20 .
                                25
Val
<210> 1666
<211> 47
<212> PRT
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Gly Arg Val Gly Gly Arg Val Gly Arg Val Gly Arg Glu Pro Gln
Val Tyr Thr Leu Pro Pro Ser Arg Glu Xaa Met Thr Lys Lys Gln Ser
                                25
Ala Glu Leu Pro Xaa Ser Xaa Gly Phe Tyr Pro Thr Lys Ser Pro
         35
                            40
                                                45
```

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<400> 1664
 Val Asn Gln Glu Thr Thr Pro Val Asp Cys Gly Ala Leu Glu Gly Leu
                                      10
 Val Gly Val Asn Leu Pro Thr Pro Tyr Asn Cys Gly Arg Ile Gln Lys
              20
                                  25
                                                       3.0
 Ser Leu Ser Phe Tyr Ile His Ser Leu Asp Val Ile Gly Pro Leu Pro
                               40
 Pro Ile Ser Leu Arg Cys His Ala Ser Met Gly Ser Gly Val Val Arg
      50
 Lys Asn Lys Arg Arg Xaa Asp Ser Leu Val Met Asp Lys Ile Leu Thr
 Thr Val Phe Pro Xaa Gly Ile Pro Tyr Xaa Xaa Phe Asn Phe Phe Phe
 Ser Leu Lys Asn
            100
<210> 1665
<211> 33
<212> PRT
<213> Homo sapiens
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<222> (24)
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<210> 1663

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<211> 95
 <212> PRT
 <213> Homo sapiens
 <400> 1663
 Ala Arg Glu Lys Leu Cys Val Arg Gly Arg Gly Leu Phe Arg Cys Arg
 Val Ser Ser Ser Cys Thr Leu Phe Lys Ser Leu His Trp Arg Asn Ser
                                  25
Ala Ile Thr Ser Ser Leu Val Ala Glu Gly Arg Gly Asn Ile His Leu
          35
                              40
 Phe Met Pro Val Cys Cys Met Gln Ala Phe Trp Leu Pro Thr Leu Gln
Gln Asn Asn Cys Thr Asn Ser Leu Val Pro Ile Pro Pro Thr Glu Ser
 65
                      70
                                         75
Pro Gly Ala Thr Val Phe Phe Ala Leu His Cys Lys Glu Arg Asp
                                      90
<210> 1664
<211> 100
<212> PRT
<213> Homo sapiens
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<223> Xaa equals any of the naturally occurring L-amino acids

35 40 45

Pro Lys Asp Phe Leu Xaa Phe Gln Ile Gly Lys Gly Thr 50 55 60

<210> 1662

<211> 54

<212> PRT

<213> Homo sapiens

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<222> (3)

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<220>

<221> SITE

<222> (19)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (22)

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<220>

<221> SITE

<222> (27)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (47)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 1662

Glu Val Xaa Gly Ile Xaa Asn Leu Asp Ile Xaa Phe Gly Thr Ser Asn 20 25 30

Pro His Ser Pro Thr His Ala Gly Gly Cys Ala Cys Arg Thr Xaa Leu  $35 \hspace{1cm} 40 \hspace{1cm} 45$ 

Thr Asp Trp Trp Ile Leu

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<400> 1660
Ser Pro Gly Leu Gln Glu Phe Gly Kaa Arg Gly Kaa Arg Asn Arg Leu
                                    10
Asn Tyr Ala Xaa Xaa His His Xaa Xaa Pro His Arg Xaa Ser Ile Pro
                                 25
Thr His Ala Leu His Ser Xaa Arg Gly Asp Asp Ala Xaa Leu Thr Ile
Lys Ile Xaa Xaa Pro Pro Met Val Leu Glu Pro Thr Ser Thr Pro Asp
     50
                        55
His Xaa Val Asp
 65
<210> 1661
<211> 61
<212> PRT
<213> Homo sapiens
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<221> SITE
<222> (48)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (54)
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<400> 1661
Leu Asn Ala Asp Thr Leu Met Asn Asp Gln Gln Gln Leu Ser Ala Leu
Lys Lys Thr Leu Ile Phe Glu Phe Thr Cys Trp Val Pro Gly Ser Asn
             20
                                 25
                                                     30
Gly Gly Lys Arg Pro Leu Phe Ile Lys Arg Gly Pro Pro Phe Xaa Xaa
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<220> <221> SITE <222> (162) <223> Xaa equals any of the naturally occurring L-amino acids <400> 1659 Ser Thr His Ala Ser Gly His Ser His Ser Gln Ala Ser Leu Ala Gly 10 Ser Arg Val Ala Arg Val Arg Cys Leu Leu Gln Leu Gln Asp Asp Arg Pro Glu Asp Ala Leu Leu Peu Peu Pro Gln Pro Arg Gln Glu Ala Thr Xaa Pro Gln Xaa Pro Ser Arg Pro Ser Arg Gly Pro Xaa Trp Leu Gly Leu Leu Lys Lys Ala Glu Xaa Gly Gly His Pro Ser Gln Glu Xaa 70 75 Pro Gly Trp Xaa Gly Glu Xaa Xaa Glu Arg Arg Pro Pro Trp Xaa Leu 90 Asn Xaa Arg Thr Phe Trp Asn Arg Ile Pro Glu Glu Gln Arg Ala Arg 105 Gly Pro Xaa Leu Xaa Xaa Arg Gly Pro Xaa Xaa Val Xaa Pro Trp Gly 115 120 Phe Leu Glu Xaa Xaa Pro Gly Lys Glu Ser Xaa Leu Arg Gly Gly Xaa 135 Phe Arg Gly Lys Xaa Leu Phe Leu Ile Lys Ala Lys Leu Gly Ile Xaa 150 155 Phe Xaa Lys Arg Lys Gly 165

<210> 1660 <211> 68 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (9)

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  <221> SITE
  <222> (123)
 <223> Xaa equals any of the naturally occurring L-amino acids
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  <400> 1657
 Ala Ala Cys Leu Pro Ala Thr Glu Xaa Ser Gln His His Glu Gly
 Leu Asp Leu Leu Ser Pro Leu Pro Gly Arg Glu Gly Leu Gly Xaa Pro
              20
                                  25
 Ser Xaa
 <210> 1658
 <211> 51
 <212> PRT
 <213> Homo sapiens
 <400> 1658
 Cys Lys Gln Tyr Leu Thr Asn Pro Gln Val Leu Asn Tyr Gln Thr Cys
 1
                 5
Ile Lys Asn Phe Gly Trp Gly Asp Leu Gly Ala Glu Pro Asn Leu Arg
Ala Val His Ala Lys Thr Ser Pro Val Lys Ala Asn Tyr Tyr Thr Gln
                             40
Leu Ile Gln
    50
<210> 1659
<211> 166
<212> PRT
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<221> SITE
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<210> 1656
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  <221> SITE
  <222> (13)
  <223> Xaa equals any of the naturally occurring L-amino acids
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  <222> (17)
  <223> Xaa equals any of the naturally occurring L-amino acids
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  <221> SITE
  <222> (19)
  <223> Xaa equals any of the naturally occurring L-amino acids
  <400> 1656
  Ala Asp Ile Gln Thr Glu Arg Ala Tyr Gln Lys Xaa Xaa Thr Ile Phe
                    5
                                       10
  Xaa Asn Xaa Lys Arg Val Leu Leu
               20
  <210> 1657
  <211> 34
  <212> PRT
  <213> Homo sapiens
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  <222> (10)
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  <400> 1654
 Val Xaa Ala Thr Asn Leu Pro Ser Leu Val Ile Ala Xaa Cys Ser Xaa
                    5
 Ile Glu Ser Leu Val Pro Leu Leu Ile Trp Pro Gln Lys Pro Pro Asn
                                   25
 Ser Pro Trp Leu Ile Leu Thr Val Xaa Pro Lys Lys Gly Thr Xaa Ser
          35
                                                   45
 Leu Gly Pro Leu Xaa Lys Lys Thr Leu Xaa Lys Xaa Asn
      50
                          55
 <210> 1655
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 <212> PRT
 <213> Homo sapiens
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<221> SITE
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<223> Xaa equals any of the naturally occurring L-amino acids
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<223> Xaa equals any of the naturally occurring L-amino acids
Ala Ala Val Leu Gln Thr Ala Arg Arg Ala Arg Ser Ala Cys Arg Leu
 1
                                    10
                                                         15
```

Xaa Xaa Xaa Xaa

Gln Pro Gln Thr Phe Cys Ser Leu Arg Glu Leu Thr Phe Pro Phe Phe 20 25 Phe Leu Phe Phe Phe Gly Xaa Leu Xaa Val Xaa Asn Lys Ile Xaa 35 40 Xaa Ala Ile Lys Lys Lys 50 <210> 1654 <211> 61 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (2) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (13) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (16) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (41) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (47) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (53) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (58) <223> Xaa equals any of the naturally occurring L-amino acids

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 Glu Ser Ser Ala Ser Thr Glu Ile Xaa Leu Xaa Leu Ile Phe Asp Ile
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 Leu His Cys Leu Leu Xaa Xaa Xaa Arg Ser Phe Leu Pro Phe Thr Ser
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                          55
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 Pro Ser Asn Tyr Val Gln Met Cys Arg Leu Leu Xaa Ser Gly Leu Ser
 Pro Lys Ala Leu Thr Leu Gly Leu Xaa Phe
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                                                         15
Thr Ala Arg Thr Gly Ala Cys Ser Val Pro Trp Glu His Xaa Ala Gln
Leu Ser Gly Val Gln Ala Val Gly Ser Phe Pro Asn Xaa Ser Ile Ser
         35
                             40
Xaa Pro Xaa Xaa Leu Lys Pro Val Gly Gln Ile Ser Lys Xaa Leu Xaa
Xaa Arg Xaa Pro Phe Thr Asn Pro Arg Phe Cys Gly Gln Cys Pro Lys
                    70
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Gly Val Gly
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  1
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Ala Gly Pro Thr Pro Leu Arg Gly Gln Cys Gln Xaa Gly Ser Leu Thr
                                 25
Gly Ala Val His Leu Ser Asn Gly Asn Ala Gly Val Leu Arg Arg Ala
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Gln Gly Gln Lys Pro Pro Val Glu Gln Lys Gly Lys Ser Ser Leu
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Asp Leu His Phe Gln Tyr Glu Tyr Arg Pro
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Val Pro Pro Pro Val Pro Trp Gly Gly Pro Xaa Arg Glu Gly Glu Val
Ser His Thr Lys Ala Asp Ala Pro Leu Val Gly Gly Xaa Trp Pro Gly
             20
                                  25
Lys Ile Glu Gly Cys Ala Gly Leu Pro Leu Arg Ala Ala Gln Thr Ala
Leu Met Cys Gly Gly Xaa Ala Arg Trp Val Arg Ala Gln Glu Val Ala
     50
Pro Xaa Thr Val Ala Asp Xaa Leu Pro Arg Val Pro Gly Ser Ser Leu
                     70
Tyr Pro Trp Tyr Ala Xaa Asn Xaa Trp Phe Pro His Pro Xaa Ala Ala
                                     90
Lys Ser Leu Phe Pro Trp Ile Ser Gln Ala Lys Leu Gly Leu
            100
                               105
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Ile Cys Pro Gln Asn Pro Leu Asn Pro Leu Val Asn Leu Thr Val Ser 1 \phantom{\bigg|} 5 \phantom{\bigg|} 10 \phantom{\bigg|} 15 \phantom{\bigg|} .
```

Pro Lys Arg Asn Ser Ser Leu Asp Thr Arg Lys Lys Pro Cys Arg Glu 20 25 30

Ser Lys Lys Phe Asn Thr His Ser Arg Pro Lys Ser Ser His Gln Leu 35 40 45

Arg Lys Arg Ser Ser Ser Thr Pro Thr Thr 50 55

<210> 1648

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<400> 1648

Cys Leu Phe Leu Leu Pro Val Met Leu Leu Gln Ile His Ile Ser Arg 1 5 10 15

Ser Thr Val Asn Val Ser Thr Ser Arg Gly Thr Pro Pro Ser Thr Leu 20 25 30

Ser Val Lys Gly Gln Asn Glu Thr Val Arg Val Lys Gly Thr Gly Arg 35 40 45

Lys Phe Ala Cys Leu Gln Val Thr Arg Ile Arg
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Ile Ile Cys Phe Val Leu Ser Phe Ile Tyr His Phe Phe Leu Tyr Lys
                                     10
Ser Ile Ile Ser Arg Phe Leu Tyr Tyr Met Ile Asp Ile Asn Trp Val
                                  25
Ile Ser Ser Arg Gln Phe Val Phe Ser Xaa Xaa Pro Pro Ser Thr Val
         35
                             40
                                                 45
Ser Gln Arg Pro Asp Xaa Val Gly Lys Val Phe Phe Leu Arg Ile Val
Lys Gly Ser Xaa Gln Leu Gly Leu Ile Lys Ala Xaa Xaa Pro
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<400> 1647

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Arg Val Gly Val Arg Leu Ala Gln Val Pro Xaa Has Leu Thr Ser Arg
                  5
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Ser His His Pro His Pro Val Phe His Xaa Arg Leu Lys Ala Thr Met
                                 25
Arg Met Xaa His Thr Glu Ala Xaa Met Xaa Xaa Asm His Leu
                            40
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His Val Arg Leu Lys Pro Ile Phe Ser Pro Phe Phe Leu Leu Phe Ser
Leu Ala Ala His Ile Val Pro Leu Phe Tyr Glu Pro Gln Phe Set Gly
Leu Ser Leu Lys Lys Lys Ser Ser Leu Asn Ile Ala Phe Arg Lys Leu
         35
                             40
Leu Phe Leu Asp Lys Lys Ser Tyr Thr Leu Lys Lys Lys Thr Phe
                         55
Ser Arg Lys Ile Tyr
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 Lys Xaa Pro Xaa Asn Leu Gly Lys Ala Arg Leu Gln Val Pro Val Arg
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 Asn Ser Arg Val Asp Leu Arg Val Phe Ile Tyr Ile Asp Ile Tyr Ile
 Asp Ile Tyr Arg Tyr Ile Tyr Arg Tyr Ile
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Xaa Pro Ala Ala Ser Tyr Leu Met Thr Leu Met Glu Pro Leu Ser Leu
Ile Xaa Xaa Xaa Leu Ser Pro Pro Leu Xaa Xaa Ser Lys Glu Asn His
             20
                                 25
Phe Asp Ala Arg Ser Cys Leu Xaa Ser Xaa Pro Lys Cys Ser Cys Ser
Xaa Pro Xaa Pro Gly Ile Ser Leu Pro Arg Asp Lys Ser Ala Ser Glu
                         55
Ile Leu His Asp Ser Leu Cys Phe Gln Asn Pro Gly Leu Phe Cys Ile
Ser Ser Phe Leu Gly Pro Ala Ser Cys Val Pro Leu Lys Gly Xaa Trp
                                    90
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<210> 1643

Ala Lys Thr

<211> 42

<212> PRT

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  Tyr Val Trp Leu Gly His Phe Val Ala Lys Val Arg Thr Cys Leu Trp
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  Lys Thr Ser Leu Trp Leu Gly Glu Ser Val Trp Pro Ala Ala Ser Asp
  Leu Cys Arg Val Leu Thr Cys Gln Gly
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Pro Lys Arg Asn Ser Ser Leu Asp Thr Arg Lys Lys Pro Cys Arg Glu 20 25 30

Ser Lys Lys Phe Asn Thr His Ser Arg Pro Lys Ser Ser His Gln Leu 35 40 45

Arg Lys Arg Ser Ser Xaa Thr Pro Thr Thr 50 55

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Met Cys Val Asp Cys Met Asn Asp Leu Glu Lys Lys Lys Lys Lys Lys 1 5 10 15

Gly Xaa Pro Xaa Pro

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 Ile Arg Xaa His Ala Thr Xaa Tyr Arg Gly Xaa Phe Cys Xaa Arg Arg
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                                      10
 Thr Xaa Xaa Leu His Ser Ala Asn Val Thr Thr Xaa Xaa Leu Leu
 Leu Xaa Xaa Phe Tyr Xaa Xaa Arg Xaa Xaa Ala Xaa Val Asn Ile Ser
          35
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 Xaa Val Pro His Cys Pro Ile
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 Gly Asp Pro Pro Glu Gly Pro Ala Thr Ser Pro Leu Thr Asn Ser Xaa
 His Pro Xaa Ser Xaa Gly Thr Ala Ala Ala Thr Gln Arg Arg Xaa Ser
              20
 Glu Gln Gly Gly Arg Xaa Thr Cys Gly Pro Ala Gly Ala Gly Ser Pro
 Xaa Xaa Pro Pro Arg Ala Xaa
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Gln Arg Pro Arg Xaa Xaa Gly Thr Gly Ser Gly Pro Pro Gly Pro Gly
Lys Ala Ser His Gly Gly Gly Ala Pro Val Ser Arg Ser Gly Thr Gly
                                  25
Ser Glu Asp Gly Arg Glu Ser Arg Ala Thr Val Val Val Xaa Cys
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Asn Glu Ala Asp Gly Asn His Pro Val Glu Val His Leu Arg Ser Asp
             20
Pro Asp Asp Ala Arg Ala Met Thr Gly Pro Ala Gly Val Ala Pro Arg
                             40
Gly Asp Gln Pro Trp Ser Ser His Arg Arg Lys Pro Leu Arg Ser Gly
     50
                        55
Lys Arg Arg Arg Lys Xaa Lys Trp Gln Lys Gln Lys Glu Pro Gln Ser
Ser Ile Gly Asp His Ser Met His Phe Leu Pro Ala Ala Thr Gln Thr
                 85
Leu Pro Glu Leu Leu Xaa Asn Leu Met
            100
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Gly Ala Ser Ala Ala Pro Arg Gly Gly Gly Pro Ala Arg Ser Pro Gly 20 25 30

Arg Val Leu Gly Arg His Ala Ala Gly Ser Leu Ala Arg Leu Val Gly 35 40 45

Arg Ser Arg Gly Phe Trp Leu Leu Gly Gly Glu Val Lys Ser Phe Cys 50 55 60

Arg Cys Trp Gly Arg Arg Thr Arg Arg Glu Arg Lys Lys Lys Lys 65 70 75 80

Lys Xaa Leu Gly Lys Tyr Phe Xaa

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   1
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  Xaa Gly Pro Pro Gly Lys Asp Gly Thr Xaa Gly His Pro Gly Ala Ile
  Gly Pro Pro Gly Pro Arg Gly Asn Xaa Gly Glu Xaa Gly Ser Xaa Gly
 Ser Pro Gly Pro Xaa Arg Ala Thr Arg Ala Leu Leu Xaa Pro Pro Gly
                          55
 Ala Pro Gly Pro Cys Cys Gly Gly Val Xaa Ala Ala Ala Ile Ala Gly
 Ile Gly Arg Leu Lys Lys Leu Gly Arg Phe Xaa Pro Arg Val Xaa Trp
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 Gly
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His Glu Gln Pro Thr Ala Ala Cys Ile Cys Ile Xaa Arg Gln Val Pro
                  5
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Pro Val Pro Ala Ala Arg Xaa Pro Gln Ser Arg Thr Xaa Ser Xaa Gln
                                  25
Ala Lys Leu Ala Leu Thr Met Pro
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Ile Phe Ile Arg Xaa Lys Arg Ile 115 120

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<212> PRT

<213> Homo sapiens

<400> 1629

As Leu Val Pro Gly Ser Ser Ala Thr Tyr Ile Ser Leu Ser Ser Cys  $1 \hspace{1cm} 5 \hspace{1cm} 10 \hspace{1cm} 15$ 

Cys Phe Val Lys Arg Lys Arg Lys Lys Lys Pro Lys Leu Val Arg Val 20 25 30

Ile Ser Asn Tyr Leu Ile Phe Cys Arg Ser Val Ile Lys Asn Leu Val 35 40 45

Ile Pro Ser Thr Ser Tyr Cys Glu Glu Glu Thr Leu Gly Pro Thr Leu 50  $\phantom{\bigg|}55\phantom{\bigg|}$  60

Lys Ser Pro Leu Val Thr His Ser His Pro Pro Gly Ser Cys Leu Pro 65 70 75 80

Gly Arg Gly Cys Arg Lys 85

<210> 1630

<211> 35

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (26)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 1630

Leu Lys Lys Lys Phe Pro Glu Glu Glu Lys Lys Thr Thr Lys Asn Lys
1 5 10 15

Thr Leu Lys Val Asp Ile Leu Cys Gly Xaa Thr Phe Glu Leu Asn Ser 20 25 30

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<212> PRT
 <213> Homo sapiens
 <220>
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 <222> (53)
 <223> Xaa equals any of the naturally occurring L-amino acids
 <220>
 <221> SITE
 <222> (93)
 <223> Xaa equals any of the naturally occurring L-amino acids
 <220>
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<220>
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<222> (111)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (117)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 1628
Arg Pro Ala Arg Ser Pro Ala Glu Val Gly Ser Arg Gly Leu Ser Ser
                                    10
                                                         15
Pro Pro Arg Ala His His Arg Pro Val Ser Pro Ala Ala Pro Gly Arg
Trp Ser Thr Ser Ala Arg Val Arg Thr Arg Lys Met Val Asn Tyr Ala
         35
                             40
Trp Ala Gly Arg Xaa Arg Arg Lys Leu Trp Trp Arg Ser Val Ala Val
Leu Thr Cys Lys Ser Val Val Arg Pro Gly Tyr Arg Gly Glu Arg Leu
65
                                        75
Asn Arg Thr Ile Leu Val Ser Trp Phe Pro Ser Glu Xaa Phe Pro Gln
                85
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<210> 1628 <211> 120

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<222> (122)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (123)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (135)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (155)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 1627
Glu Leu Gln Ala Ser Glu Asn Gln Pro Cys Ser Arg His Ala Arg Pro
Arg Leu Pro Ser Ser Leu Phe Pro Leu Pro Ala Gln Pro Ser Leu Pro
             20
                                 25
Ser Ser Ala Gly Lys Ala Gly Thr His Ser Gly Cys Leu Pro Pro Gly
Gly Lys Glu Arg Glu Gly Gly Trp Val Gly Xaa Gly Leu Pro Pro Gly
     50
Asn Val Thr Leu Pro Gly Pro Arg Ile Ala Pro Gly Pro Lys
Ala Gln Pro Gly Thr Lys Leu Arg Xaa Ser Ala Gly Arg Ser Tyr Phe
Tyr Leu Pro Pro Pro Leu Leu Val Pro Pro Pro Gly Arg Leu Ala Ala
            100
                                105
Glu Ser Asp Thr Gly Xaa Xaa Lys Xaa Xaa Kaa Glu Pro Trp Tyr Pro
                            120
Ile Leu Gly Pro Gly Pro Xaa Leu Gly Pro Asn Pro Ser Ser Val Asp
    130
Asn Gly Val Trp Asn Lys Cys Cys Leu Ser Xaa Gln Gln Lys Lys
145
                                        155
Lys Arg Gly Gly Arg Phe Arg Gly Phe Lys Ala
               165
```

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<220>
  <221> SITE
  <222> (8)
 <223> Xaa equals any of the naturally occurring L-amino acids
 <220>
 <221> SITE
 <222> (26)
 <223> Xaa equals any of the naturally occurring L-amino acids
 <400> 1626
 Ala Arg Ala Gly Ile Val Pro Xaa His Ser Ser Leu Gly Asp Arg Ala
                   5
                                       10
 Arg Leu His Leu Lys Lys Lys Lys Xaa
              20
 <210> 1627
 <211> 171
 <212> PRT
 <213> Homo sapiens
 <220>
 <221> SITE
<222> (59)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (89)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (118)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (119)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (121)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
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```
Phe Leu Ser Lys Leu Cys Xaa Xaa Arg Gly Ser Thr Asp Phe Leu Gly 35 40 45
```

Pro Val Asn Leu Asn Gln Ser Leu Arg Phe Cys Gln Glu Ser Ser Leu 50 60

Leu Ser Lys Trp Val Phe Pro Asn Gly His Asn Gly Lys Xaa Xaa Arg 65 70 75 80

Gly Xaa Asn Ile Lys Lys Xaa Lys Lys Asn Leu Gly Gly Kaa 85 90 95

```
<210> 1625
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<211> 40

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (10)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (16)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (26)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 1625

Ala Arg Ala Thr Met Ala Leu Trp Thr Xaa Val Ser Phe Ala Glu Xaa 1 5 10 15

Leu Glu Arg Gly Ser Asp Glu Lys Val Xaa Leu Lys Arg Leu Ala Arg
20 25 30

Leu Leu Gly Leu Ile Thr Ala Pro 35 40

<210> 1626

<211> 26

<212> PRT

<213> Homo sapiens

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<221> SITE
<222> (4)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (24)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
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<222> (39)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (40)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (78)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (79)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (82)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (87)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (95)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 1624
Ile His Pro Xaa Leu Ala Ser Gln Val Ala Gly His Tyr Arg Arg Glu
 1
                                     10
                                                          15
His Ser Arg Pro Arg Leu Lys Xaa Ala Tyr Ser Lys Lys Gln Phe Gln
```

30

```
<222> (7)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (10)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (23)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (29)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (33)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (39)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (40)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 1623
Leu Arg Thr Ser Cys Phe Xaa Leu Asn Xaa Met Ile His Phe Ile Lys
                            · 10
Val Pro Val Ile Lys Tyr Xaa Val Lys Tyr Leu Leu Xaa Trp Thr Ile
             20
                                25
Xaa Cys Lys Leu Pro Phe Xaa Xaa
<210> 1624
<211> 95
<212> PRT
<213> Homo sapiens
<220>
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1684

1 10 Pro Lys Val Pro Ser Pro Glu Arg Ser Ala Pro Arg Val Pro Leu Pro 20 25 Ser Pro Gln Pro Ser Tyr Pro Phe Arg Pro Ala Ala Ser Gly Gly Thr 40 Pro Pro Pro Ala Cys Leu Pro Pro Ala Gln Pro Cys Gln Val Pro Pro 55 Ala Met Asn Leu Phe Arg Phe Leu Gly Lys Leu Ser Gln Leu Leu Ala 65 70 75 Ile Ile Leu Leu Leu Xaa Ile Trp Asn Ser Arg Ser Cys Ala Glu Ile Gln Glu Lys Asn Ser Pro Val Trp Cys Gly Xaa Phe Asn Gly Xaa 100 105 Ile <210> 1622 <211> 21 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (6) <223> Xaa equals any of the naturally occurring L-amino acids <400> 1622 Val Phe Lys Thr Met Xaa Gln Val Ser Asn Asp Glu Ile Lys His Leu 10 Phe Val Leu Tyr Gln 20 <210> 1623 <211> 40 <212> PRT <213> Homo sapiens <220> <221> SITE

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<211> 52
 <212> PRT
 <213> Homo sapiens
 <220>
 <221> SITE
 <222> (28)
 <223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (35)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 1620
Pro Thr Glu Gln Val Thr Leu Gly Ile Thr Ala Gln Ser Tyr Ser Arg
                   5
                                                          15
Val His Ile Asn Asn Arg Val Tyr Asp Leu Asp Xaa Gly Ser Gly His
Pro Asp Xaa Ala Ala Ala Ile Lys Gly Ser Phe Val Gln Arg Leu Lys
                             40
Ser Tyr Val Ile
     50
<210> 1621
<211> 113
<212> PRT
<213> Homo sapiens
<220>
<221> SITE
<222> (87)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (108)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (112)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 1621
Leu Phe Pro Ala Pro Ala Pro Pro Pro Ala Pro Ala Phe Ala Pro Pro
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<220>
  <221> SITE
  <222> (2)
  <223> Xaa equals any of the naturally occurring L-amino acids
  <220>
  <221> SITE
  <222> (5)
  <223> Xaa equals any of the naturally occurring L-amino acids
  <220>
  <221> SITE
  <222> (17)
  <223> Xaa equals any of the naturally occurring L-amino acids
  <220>
 <221> SITE
 <222> (22)
 <223> Xaa equals any of the naturally occurring L-amino acids
 <400> 1618
 Gly Xaa Gly Phe Xaa Pro Ser Pro Ser Cys Phe Pro Gln Cys Leu Lys
                                      10
 Xaa Leu Asp Gly Leu Xaa
              20
<210> 1619
 <211> 52
<212> PRT
<213> Homo sapiens
<400> 1619
Gln Ser Ile Ser Leu Asn Arg Asp Gly Val Glu Glu Leu Lys Val Gly
                  5
                                                         15
Ile Cys Ser Leu Met Thr Thr Met Phe Thr Ile Cys Cys Gly Leu Val
Gly Ala Leu Arg Gln Glu Asn His Val Glu Pro Thr Gly Ser Arg Pro
         35
                             40
                                                 45
Ala Trp Glu Thr
     50
```

<213> Homo sapiens

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Lys Lys Lys Lys Lys Lys Lys Xaa Xaa Lys Xaa Xaa
 <210> 1617
  <211> 37
  <212> PRT
  <213> Homo sapiens
 <220>
<221> SITE
 <222> (4)
  <223> Xaa equals any of the naturally occurring L-amino acids
 <220>
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 <222> (11)
 <223> Xaa equals any of the naturally occurring L-amino acids
 <220>
 <221> SITE
 <222> (20)
 <223> Xaa equals any of the naturally occurring L-amino acids
 <220>
 <221> SITE
 <222> (26)
 <223> Xaa equals any of the naturally occurring L-amino acids
 <220>
 <221> SITE
 <222> (36)
 <223> Xaa equals any of the naturally occurring L-amino acids
 <400> 1617
 Gly Pro Ala Xaa Trp Arg Glu Thr Pro Pro Xaa Leu Tyr Lys Glu Phe
 Pro Gly Val Xaa Gly Ser Phe Ser Leu Xaa Ser Glu Trp Gly Ala Gln
             20
                                25
                                                    30
 Ile Trp Ala Xaa Cys
         35
 <210> 1618
 <211> 22
 <212> PRT
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